

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**

=> file reg

FILE 'REGISTRY' ENTERED AT 12:21:39 ON 24 JUN 2003
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2003 American Chemical Society (ACS)

=> d his

FILE 'LREGISTRY' ENTERED AT 11:58:27 ON 24 JUN 2003
L1 STR
E BENZENE/CN
L2 1 S E3
L3 503 S C H O S/ELF AND 1/NRS AND 46.150.18/RID

FILE 'REGISTRY' ENTERED AT 12:05:46 ON 24 JUN 2003
L4 59483 S C H O S/ELF AND 1/NRS AND 46.150.18/RID
L5 SCR 2043
L6 1 S L1 NOT L5 SSS SAM SUB=L4

FILE 'LREGISTRY' ENTERED AT 12:13:03 ON 24 JUN 2003
L7 446 S C H/ELF AND 1/NRS AND 46.150.18/RID

FILE 'REGISTRY' ENTERED AT 12:13:43 ON 24 JUN 2003
L8 41431 S C H/ELF AND 1/NRS AND 46.150.18/RID
L9 99711 S L4 OR L8

FILE 'LREGISTRY' ENTERED AT 12:13:58 ON 24 JUN 2003
L10 STR L1

FILE 'REGISTRY' ENTERED AT 12:14:32 ON 24 JUN 2003
L11 8 S L10 NOT L5 SSS SAM SUB=L9
L12 161 S L10 NOT L5 SSS FUL SUB=L9
SAV L12 OGD642/A
L13 1 S L1 SSS SAM SUB=L12
L14 58 S L1 SSS FUL SUB=L12
SAV L14 OGD642A/A
L15 103 S L12 NOT L14

FILE 'HCA' ENTERED AT 12:16:46 ON 24 JUN 2003
L16 88 S L14
L17 0 S (L15/D OR L15/DP) (L) (SULPHONAT? OR SULFONAT? OR POLYSUL
L18 10 S L15 (L) (SULPHONAT? OR SULFONAT? OR POLYSULPHONAT? OR POL
L19 3 S L18 AND L16
L20 7 S L18 NOT L19
L21 85 S L16 NOT (L19 OR L20)

FILE 'LREGISTRY' ENTERED AT 12:42:49 ON 24 JUN 2003
L22 STR L1

FILE 'REGISTRY' ENTERED AT 12:44:08 ON 24 JUN 2003

L23 1 S L22 SSS SAM SUB=L12
L24 13 S L22 SSS FUL SUB=L12
SAV L24 OGD642B/A

FILE 'HCA' ENTERED AT 12:45:22 ON 24 JUN 2003

L25 5 S L24
L26 3 S L25 NOT L19

FILE 'REGISTRY' ENTERED AT 12:46:52 ON 24 JUN 2003

L27 STR L22

FILE 'REGISTRY' ENTERED AT 12:47:26 ON 24 JUN 2003

L28 7 S L27 SSS SAM SUB=L12
L29 88 S L27 SSS FUL SUB=L12
SAV L29 OGD642C/A
L30 55 S L29 NOT S/ELS

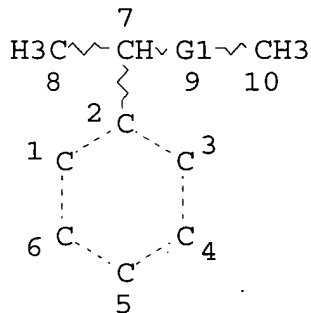
FILE 'HCA' ENTERED AT 12:49:23 ON 24 JUN 2003

L31 0 S (L30/D OR L30/DP) (L) (SULPHONAT? OR POLYSULPHONAT? OR SU
L32 2 S L30 (L) (SULPHONAT? OR POLYSULPHONAT? OR SULFONAT? OR POL

FILE 'REGISTRY' ENTERED AT 12:21:39 ON 24 JUN 2003

=> d l14 que stat

L1 STR



REP G1=(4-16) CH2
VAR G2=SO3H/OSO3H
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

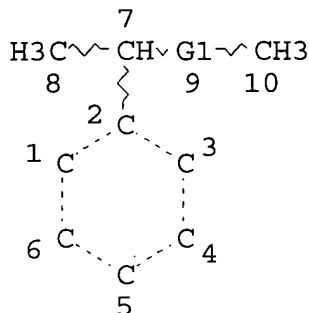
GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS 11

STEREO ATTRIBUTES: NONE

L4 59483 SEA FILE=REGISTRY C H O S/ELF AND 1/NRS AND 46.150.18/RID

L5 SCR 2043

L8 41431 SEA FILE=REGISTRY C H/ELF AND 1/NRS AND 46.150.18/RID
L9 99711 SEA FILE=REGISTRY L4 OR L8
L10 STR



REP G1=(4-16) CH2
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS 10

STEREO ATTRIBUTES: NONE
L12 161 SEA FILE=REGISTRY SUB=L9 SSS FUL L10 NOT L5
L14 58 SEA FILE=REGISTRY SUB=L12 SSS FUL L1

100.0% PROCESSED 58 ITERATIONS 58 ANSWERS
SEARCH TIME: 00.00.01

=> d l24 que stat

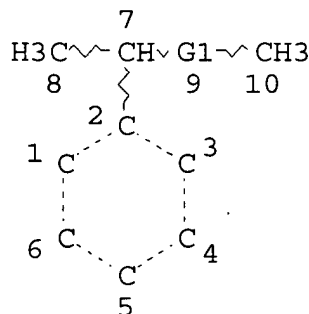
L4 59483 SEA FILE=REGISTRY C H O S/ELF AND 1/NRS AND 46.150.18/RID

L5 SCR 2043

L8 41431 SEA FILE=REGISTRY C H/ELF AND 1/NRS AND 46.150.18/RID

L9 99711 SEA FILE=REGISTRY L4 OR L8

L10 STR

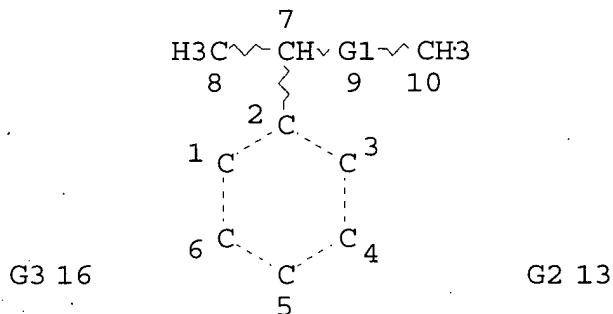


REP G1=(4-16) CH2

NODE ATTRIBUTES:
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
 RSPEC I
 NUMBER OF NODES IS 10

STEREO ATTRIBUTES: NONE
 L12 161 SEA FILE=REGISTRY SUB=L9 SSS FUL L10 NOT L5
 L22 STR



REP G1=(4-16) CH2
 VAR G2=SO3H/OSO3H
 VAR G3=ME/ET
 NODE ATTRIBUTES:
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
 RSPEC I
 NUMBER OF NODES IS 12

STEREO ATTRIBUTES: NONE
 L24 13 SEA FILE=REGISTRY SUB=L12 SSS FUL L22

100.0% PROCESSED 58 ITERATIONS
 SEARCH TIME: 00.00.01

13 ANSWERS

=> d 129 que stat

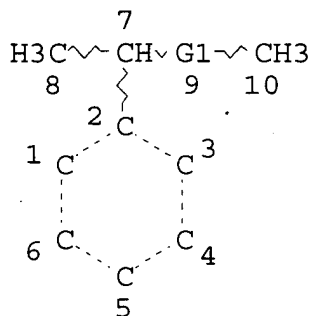
L4 59483 SEA FILE=REGISTRY C H O S/ELF AND 1/NRS AND 46.150.18/RID

L5 SCR 2043

L8 41431 SEA FILE=REGISTRY C H/ELF AND 1/NRS AND 46.150.18/RID

L9 99711 SEA FILE=REGISTRY L4 OR L8

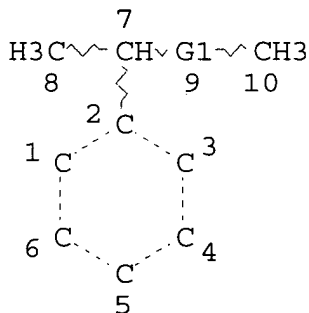
L10 STR



REP G1=(4-16) CH2
 NODE ATTRIBUTES:
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
 RSPEC I
 NUMBER OF NODES IS 10

STEREO ATTRIBUTES: NONE
 L12 161 SEA FILE=REGISTRY SUB=L9 SSS FUL L10 NOT L5
 L27 STR



G3 16

REP G1=(4-16) CH2
 VAR G3=ME/ET
 NODE ATTRIBUTES:
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
 RSPEC I
 NUMBER OF NODES IS 11

STEREO ATTRIBUTES: NONE
 L29 88 SEA FILE=REGISTRY SUB=L12 SSS FUL L27

100.0% PROCESSED 161 ITERATIONS
 SEARCH TIME: 00.00.01

88 ANSWERS

=> file hca

FILE 'HCA' ENTERED AT 12:22:35 ON 24 JUN 2003

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2003 AMERICAN CHEMICAL SOCIETY (ACS)

=> d l19 1-3 ibib abs hitstr hitrn

L19 ANSWER 1 OF 3 HCA COPYRIGHT 2003 ACS

ACCESSION NUMBER: 124:179445 HCA

TITLE: Manufacture of dialkylbenzenesulfonate
collectors useful in ore flotation

INVENTOR(S): Frazier, Kevin A.; Garces, Juan M.; Lee, Guo
Shuh J.

PATENT ASSIGNEE(S): The Dow Chemical Company, USA

SOURCE: U.S., 9 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
US 5468407	A	19951121	US 1994-333659	19941103
PRIORITY APPLN. INFO.:			US 1994-333659	19941103
OTHER SOURCE(S):	MARPAT 124:179445			

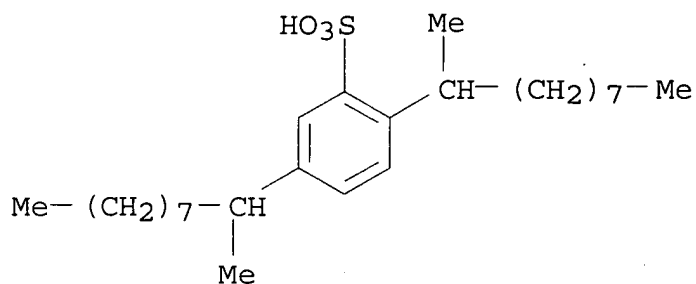
AB A compn. showing improved properties as a mineral collector in ore flotation comprises a mixt. of specified dialkylbenzenemonosulfonic acids or salts contg. >60% of p-dialkylbenzene isomer and >80% of the combined di(2-alkyl)benzene and di(3-alkyl)benzene isomers. For example, a compn. manufd. by alkylating cumene with 1-hexadecene in the presence of dealuminated mordenite zeolite (prepn. given) gave mainly p-(2-hexadecyl)cumene and only 8% other isomers [mainly p-(3-hexadecyl)cumene]. This product was sulfonated and tested in an ore collection test to give significantly better flotation recovery than a sulfonated mixt. of hexadecylcumene isomers obtained by alkylation of cumene with 1-hexadecene using conventional Friedel-Crafts catalyst (AlCl₃).

IT 173196-31-1P 173196-32-2P 174205-18-6P
174205-19-7P

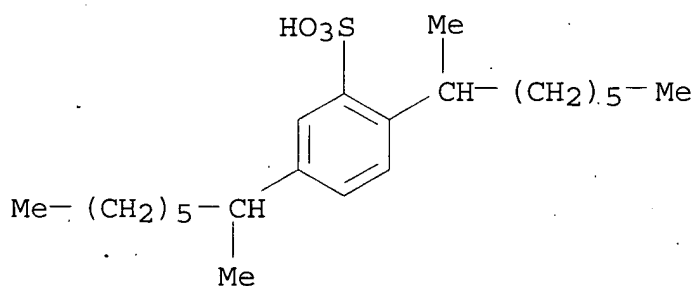
(chem. collector; manuf. of dialkylbenzenesulfonate collectors
useful in ore flotation)

RN 173196-31-1 HCA

CN Benzenesulfonic acid, 2,5-bis(1-methylnonyl)- (9CI) (CA INDEX NAME)



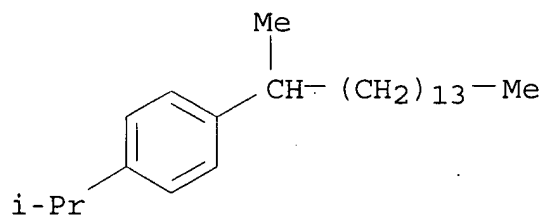
RN 173196-32-2 HCA

CN Benzenesulfonic acid, 2,5-bis(1-methylheptyl)-, sodium salt (9CI)
(CA INDEX NAME)

● Na

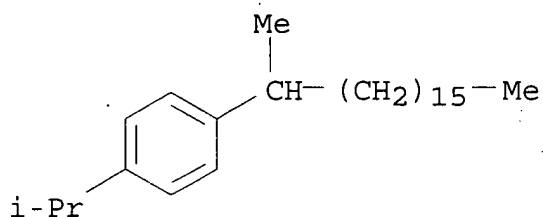
RN 174205-18-6 HCA

CN Benzenesulfonic acid, 2(or 5)-(1-methylethyl)-5(or 2)-(1-methylpentadecyl)- (9CI) (CA INDEX NAME)

D1-SO₃H

RN 174205-19-7 HCA

CN Benzenesulfonic acid, 2(or 5)-(1-methylethyl)-5(or 2)-(1-methylheptadecyl)- (9CI) (CA INDEX NAME)

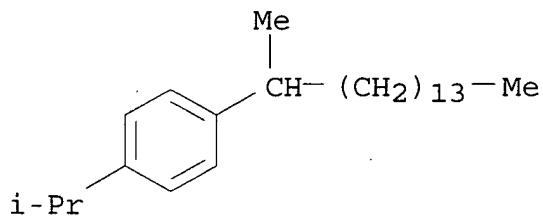
D1-SO₃H

IT 173196-27-5P

(manuf. and **sulfonation** of; manuf. of
dialkylbenzenesulfonate collectors useful in ore flotation)

RN 173196-27-5 HCA

CN Benzene, 1-(1-methylethyl)-4-(1-methylpentadecyl)- (9CI) (CA INDEX NAME)

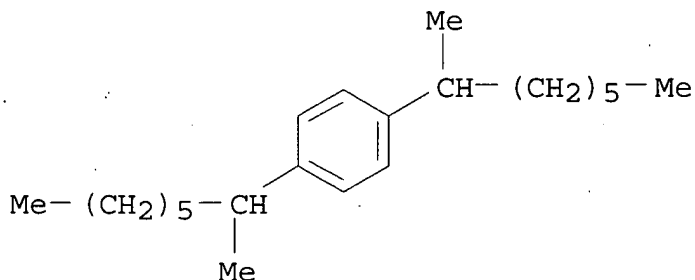


IT 10541-42-1P 37415-47-7P 173196-29-7P

(manuf. and **sulfonation** of; manuf. of
dialkylbenzenesulfonate collectors useful in ore flotation)

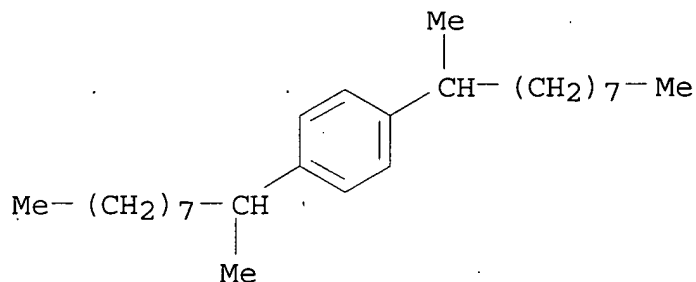
RN 10541-42-1 HCA

CN Benzene, 1,4-bis(1-methylheptyl)- (9CI) (CA INDEX NAME)



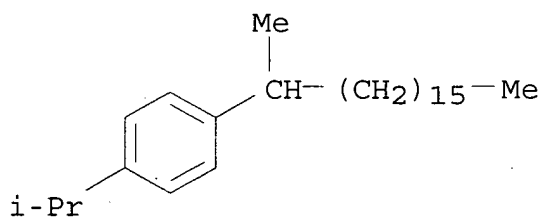
RN 37415-47-7 HCA

CN Benzene, 1,4-bis(1-methylnonyl)- (9CI) (CA INDEX NAME)



RN 173196-29-7 HCA

CN Benzene, 1-(1-methylethyl)-4-(1-methylheptadecyl)- (9CI) (CA INDEX NAME)

IT 173196-31-1P 173196-32-2P 174205-18-6P
174205-19-7P

(chem. collector; manuf. of dialkylbenzenesulfonate collectors useful in ore flotation)

IT 173196-27-5P

(manuf. and **sulfonation** of; manuf. of dialkylbenzenesulfonate collectors useful in ore flotation)

IT 10541-42-1P 37415-47-7P 173196-29-7P

(manuf. and **sulfonation** of; manuf. of dialkylbenzenesulfonate collectors useful in ore flotation)

L19 ANSWER 2 OF 3 HCA COPYRIGHT 2003 ACS

ACCESSION NUMBER: 113:77807 HCA

TITLE: Sulfonation studies of monoisomeric di- and trialkylbenzenes

AUTHOR(S): Grey, Roger A.; Chan, Albert F.

CORPORATE SOURCE: ARCO Chem. Co., Newton Square, PA, 19073, USA

SOURCE: Journal of the American Oil Chemists' Society (1990), 67(2), 132-41

CODEN: JAOCA7; ISSN: 0003-021X

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Sulfonation of isomerically pure di- and trialkylbenzenes by SO₃ and its Lewis acid adducts tended to occur para to alkyl substituents. In the case of 1-alkyl-3,4-dimethylbenzenes, the selectivity for sulfonation para to the 3-Me group was 87-99% despite steric hindrance by the 1-alkyl group. The position of sulfonation was

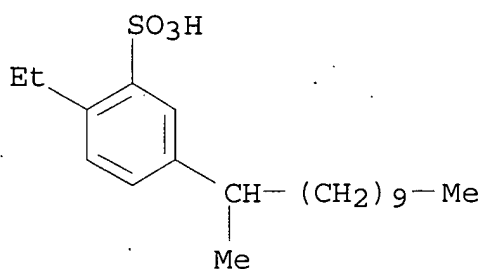
detd. by a combination of NMR and HPLC methods.

IT 128591-08-2P 128591-19-5P

(prepn. of)

RN 128591-08-2 HCA

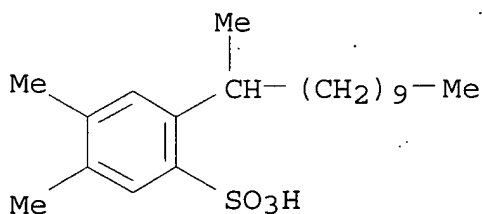
CN Benzenesulfonic acid, 2-ethyl-5-(1-methylundecyl)-, sodium salt
(9CI) (CA INDEX NAME)



● Na

RN 128591-19-5 HCA

CN Benzenesulfonic acid, 4,5-dimethyl-2-(1-methylundecyl)-, sodium salt
(9CI) (CA INDEX NAME)



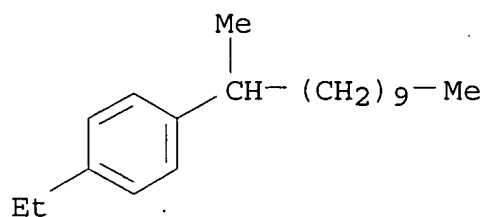
● Na

IT 115416-73-4 128591-03-7

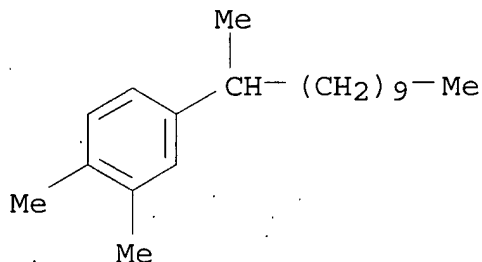
(sulfonation of, regiochem. of)

RN 115416-73-4 HCA

CN Benzene, 1-ethyl-4-(1-methylundecyl)- (9CI) (CA INDEX NAME)



RN 128591-03-7 HCA
CN Benzene, 1,2-dimethyl-4-(1-methylundecyl)- (9CI) (CA INDEX NAME)

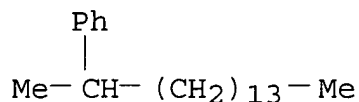


IT 128591-08-2P 128591-19-5P
(prepn. of)
IT 115416-73-4 128591-03-7
(sulfonation of, regiochem. of)

L19 ANSWER 3 OF 3 HCA COPYRIGHT 2003 ACS
ACCESSION NUMBER: 89:113491 HCA
TITLE: Surfactants for producing low interfacial tensions. I: Linear alkyl benzene sulfonates
AUTHOR(S): Doe, Peter H.; El-Emary, Mahmoud; Wade, William H.; Schechter, Robert S.
CORPORATE SOURCE: Dep. Chem., Univ. Texas, Austin, TX, USA
SOURCE: Journal of the American Oil Chemists' Society (1977), 54(12), 570-7
CODEN: JAOCA7; ISSN: 0003-021X
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A series of linear alkylbenzenesulfonates with accurately defined structures was synthesized, and the compds. were examd. for their ability to promote very low interfacial tensions between alkanes, alkylbenzenes, or alkylcyclohexanes and water. Each sulfonate surfactant gave its lowest tension against a particular member of the homologous series. The position of the min. tension within the alkane series varied in a systematic and predicted manner. Relations were developed that are useful in characterizing the low interfacial tension behavior of oils and surfactants, and applications of these relations in devising surfactant systems for the tertiary recovery of petroleum are discussed. Linear alkylbenzenesulfonates are unlikely to be the best candidates for surfactant flooding in tertiary oil recovery.

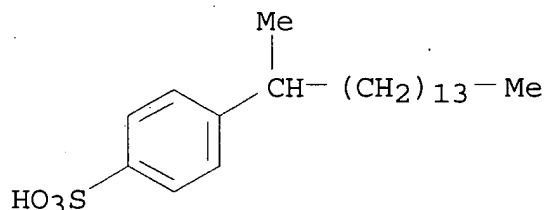
IT 13419-16-4P
(prepn. and sulfonation of)
RN 13419-16-4 HCA
CN Benzene, (1-methylpentadecyl)- (9CI) (CA INDEX NAME)



IT 13419-32-4P

(prepn. and surfactant properties of)

RN 13419-32-4 HCA

CN Benzenesulfonic acid, 4-(1-methylpentadecyl)-, sodium salt (9CI)
(CA INDEX NAME)

● Na

IT 13419-16-4P

(prepn. and **sulfonation** of)

IT 13419-32-4P

(prepn. and surfactant properties of)

=> d 126 1-3 ibib abs hitstr hitind

L26 ANSWER 1 OF 3 HCA COPYRIGHT 2003 ACS

ACCESSION NUMBER: 121:311765 HCA

TITLE: Photographic composition containing a thickening agent.

INVENTOR(S): Ross, Robert John; Bagchi, Pranab; Connelly, Richard Wayne

PATENT ASSIGNEE(S): Eastman Kodak Co., USA

SOURCE: Eur. Pat. Appl., 25 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

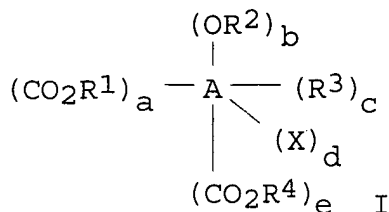
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 597289	A1	19940518	EP 1993-116962	19931105
EP 597289	B1	19970312		

R: BE, CH, DE, FR, GB, IT, LI, NL

JP 06202266 A2 19940722 JP 1993-282356 19931111
 US 5610002 A 19970311 US 1995-558974 19951113
 PRIORITY APPLN. INFO.: US 1992-975238 19921112
 US 1994-264552 19940623
 OTHER SOURCE(S): MARPAT 121:311765
 GI



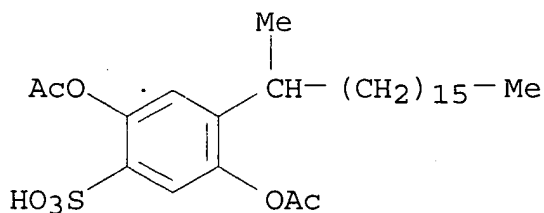
AB This invention describes gelatin thickening compds. for photog. coating melts with the general structure I wherein A is an arom. or heteroatom. group; X is SO₃M or CO₂M M is H or an alkali metal, NH₄⁺ or pyridinium ion; each R¹ and R² is independently an alkyl or substituted alkyl group, each alkyl group being straight or branched chain and having 1 to 30 C atoms; each R³ and R⁴ is independently H or an alkyl or substituted alkyl group, each alkyl group being straight or branched chain and having 1 to 30 C atoms; each of a, b, c and e is independently 0, 1, 2 or 3; and d is 1, 2, or 3; with the proviso that when A is Ph, X is SO₃M, d is 1 and any one of a, c, or e is 1, the same of a + b + c + e is at least 2.

IT 159322-55-1P

(photog. emulsion gelatin thickening agent)

RN 159322-55-1 HCA

CN Benzenesulfonic acid, 2,5-bis(acetyloxy)-4-(1-methylheptadecyl)-, sodium salt (9CI) (CA INDEX NAME)



● Na

IC ICM G03C001-04

ICS G03C001-047; G03C001-06; G03C001-30; G03C001-74

CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 35

IT 159322-55-1P

(photog. emulsion gelatin thickening agent)

L26 ANSWER 2 OF 3 HCA COPYRIGHT 2003 ACS

ACCESSION NUMBER: 75:114802 HCA

TITLE: Photographic films having carbon-containing backing layers

INVENTOR(S): Elins, Herbert S.

SOURCE: Def. Publ. U. S. Pat. Off. T, 24 pp. From: Off. Gaz., U. S. Patent Off. 1971 888(3), 707.

CODEN: USXXBN

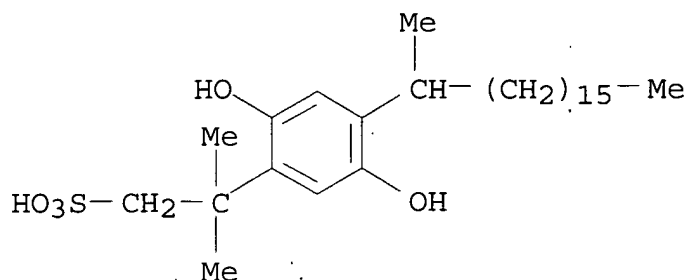
DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
US 888012		19710720	US	19701125
AB	Certain photog. films, such as color films of the type disclosed by Mannes, et al. (U.S. 2,252,718) have an antihalation or antistatic backing layer composed of carbon black dispersed in a cellulosic binder. A problem may occur with this type of film, esp. under conditions of high humidity, when the C-contg. layer is in contact with the top emulsion layer as happens when the film is tightly wound upon itself. This problem is apparently assocd. with oxidn. of materials in the top emulsion layer and, in the case of color film of the type indicated, manifests itself in the phenomenon known as "yellow mottle ferrotyping." The problem is avoided or reduced by placing an antioxidant, such as a hydroquinone, a catechol, an aminophenol, a 3-pyrazolidinone, an ascorbic acid deriv., a reductone or a phenylenediamine in the C-contg. backing layer or in an overcoat layer for the top emulsion layer or for the backing layer. Antioxidants, such as ascorbyl palmitate, 3-hydroxy-5-(4-pyridyl)tetronimide, piperidinohexose reductone, and 2-(2-octadecyl)-5-(2-sulfo-tert-butyl)hydroquinone, not only prevent yellow mottle ferrotyping when the color film comes in contact with the backing layer, but prevent loss of latent image in the film caused by air oxidn. under humid conditions.			
IT	34276-76-1 (antioxidant, for carbon-contg. backing layers in color photographic films)			
RN	34276-76-1 HCA			
CN	1-Propanesulfonic acid, 2-[2,5-dihydroxy-4-(1-methylheptadecyl)phenyl]-2-methyl- (8CI) (CA INDEX NAME)			



IC G03C
 NCL 096087000
 CC 74 (Radiation Chemistry, Photochemistry, and Photographic Processes)
 IT 137-66-6 34276-75-0 **34276-76-1** 34421-11-9
 (antioxidant, for carbon-contg. backing layers in color
 photographic films)

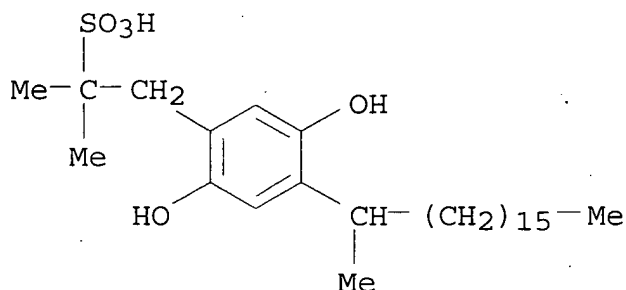
L26 ANSWER 3 OF 3 HCA COPYRIGHT 2003 ACS
 ACCESSION NUMBER: 64:48886 HCA
 ORIGINAL REFERENCE NO.: 64:9135d-g
 TITLE: Emulsions for direct positive color images
 INVENTOR(S): Whitmore, Keith E.
 PATENT ASSIGNEE(S): Eastman Kodak Co.
 SOURCE: 18 pp.
 DOCUMENT TYPE: Patent
 LANGUAGE: Unavailable
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3227552		19660104	US	19620828

GI For diagram(s), see printed CA Issue.
 AB Photographic elements contg. at least 1 reversal Ag halide emulsion are treated with aromatic primary amino developers in the presence of a compd. of the general formula RNHNHR₁ (I) or RNHN:X (II), where R is an aryl group (which can contain OH, NH₂, or alkyl, amino, amido, alkoxy, aryloxy, or acyloxy groups), R₁ is an acyl or sulfonyl group, and X is an alkylidene group, and (optional) a compd. of the general formula III or IV, where R is an alkylene or acylamino group, R₁ and R₂ are alkyl or acylamino groups, or R₁ is H or SO₃H, at 1-20 mg. I or II/sq. ft. light-sensitive layer or 0.1-2 g. I or II/l. developer, to give images with increased dye d. Thus, a film support (720 sq. ft.) is coated with 7200 g. aq. compn. contg. 1 mole Ag(Cl,Br) emulsion having high internal sensitivity, low surface sensitivity, and sensitized to red light, 590 g. 10% gelatin (H₂O), 360 cc. 3% aq. di-K 2-(3,5-disulfobenzamido)-4-(3-octadecylcarbamoylphenylthio)-5-methylphenol, 500 cc. 15% saponin (H₂O), 10 cc. 10% aq. H₂CO, and 450 cc. 2% 5-(1-carbo-2-phenylhydrazino)-1-phenyl-3-pyrazolidone (V) (MeOH), and the element

is exposed and developed with 1 l. developer contg. 10 g. p-H₂NC₆H₄N(Et)CH₂CH₂OH, to give Cyan Dmax. 1.50 as compared with 1.13 for the control (no V).

IT **6892-66-6**, Ethanesulfonic acid, 2-[2,5-dihydroxy-4-(1-methylheptadecyl)phenyl]-1,1-dimethyl-
(in photographic color developer for diffusion-transfer process)
RN 6892-66-6 HCA
CN Ethanesulfonic acid, 2-[2,5-dihydroxy-4-(1-methylheptadecyl)phenyl]-1,1-dimethyl- (7CI, 8CI) (CA INDEX NAME)



NCL 096003000
CC 11 (Radiation Chemistry and Photochemistry)
IT 114-83-0, Acetic acid, 2-phenylhydrazide 6596-66-3, Acetic acid, phenyl-, 2-phenylhydrazide 6596-68-5, Benzoic acid, 2-(2,4-di-tert-pentylphenoxy)-5-(3,5-disulfobenzamido)-, 2-phenylhydrazide 6596-70-9, Acetic acid, 2-(p-methanesulfonamidophenyl)hydrazide 6596-72-1, Acetic acid, 2-(p-acetamidophenyl)hydrazide 6596-73-2, Acetic acid, 2-(p-benzenesulfonamidophenyl)hydrazide 6596-76-5, Methanesulfonamide, N-[p-(benzylidenehydrazino)phenethyl]- 6596-79-8, Malealdehydic acid, dichloro-, [p-(2-methanesulfonamidoethyl)phenyl]hydrazone **6892-66-6**, Ethanesulfonic acid, 2-[2,5-dihydroxy-4-(1-methylheptadecyl)phenyl]-1,1-dimethyl-
(in photographic color developer for diffusion-transfer process)

=> d 132 1-2 cbib abs hitstr hitind

L32 ANSWER 1 OF 2 HCA COPYRIGHT 2003 ACS

124:179445 Manufacture of dialkylbenzenesulfonate collectors useful in ore flotation. Frazier, Kevin A.; Garces, Juan M.; Lee, Guo Shuh J. (The Dow Chemical Company, USA). U.S. US 5468407 A 19951121, 9 pp. (English). CODEN: USXXAM. APPLICATION: US 1994-333659 19941103.

AB A compn. showing improved properties as a mineral collector in ore flotation comprises a mixt. of specified dialkylbenzenemonosulfonic acids or salts contg. >60% of p-dialkylbenzene isomer and >80% of the combined di(2-alkyl)benzene and di(3-alkyl)benzene isomers. For example, a compn. manufd. by alkylating cumene with 1-hexadecene in the presence of dealuminated mordenite zeolite (prepn. given) gave mainly p-(2-hexadecyl)cumene and only 8% other isomers [mainly

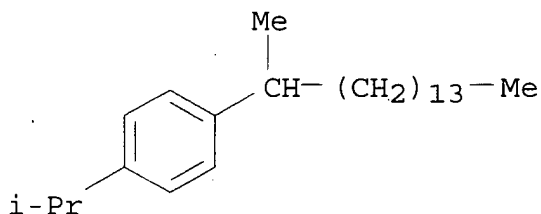
p-(3-hexadecyl)cumene]. This product was sulfonated and tested in an ore collection test to give significantly better flotation recovery than a sulfonated mixt. of hexadecylcumene isomers obtained by alkylation of cumene with 1-hexadecene using conventional Friedel-Crafts catalyst (AlCl_3).

IT 173196-27-5P

(manuf. and **sulfonation** of; manuf. of dialkylbenzenesulfonate collectors useful in ore flotation)

RN 173196-27-5 HCA

CN Benzene, 1-(1-methylethyl)-4-(1-methylpentadecyl)- (9CI) (CA INDEX NAME)

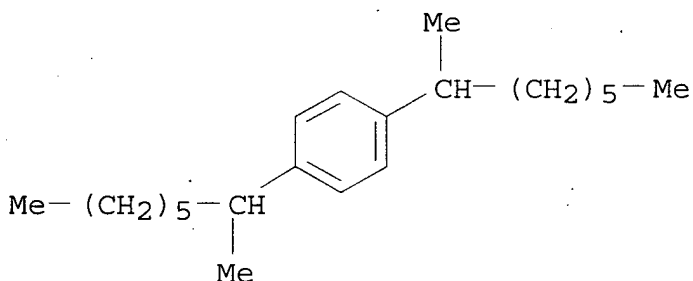


IT 10541-42-1P 37415-47-7P 173196-29-7P

(manuf. and **sulfonation** of; manuf. of dialkylbenzenesulfonate collectors useful in ore flotation)

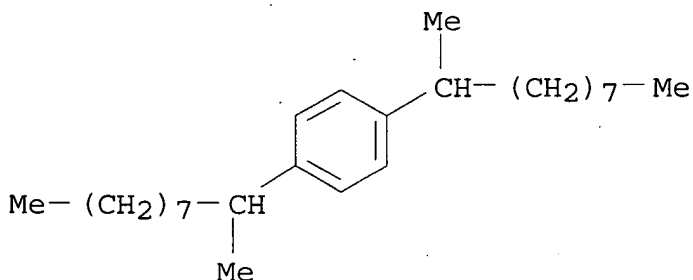
RN 10541-42-1 HCA

CN Benzene, 1,4-bis(1-methylheptyl)- (9CI) (CA INDEX NAME)

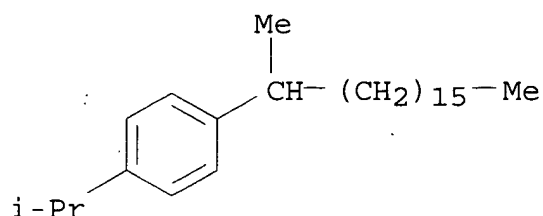


RN 37415-47-7 HCA

CN Benzene, 1,4-bis(1-methylnonyl)- (9CI) (CA INDEX NAME)



RN 173196-29-7 HCA
CN Benzene, 1-(1-methylethyl)-4-(1-methylheptadecyl)- (9CI) (CA INDEX NAME)



IC ICM B03D001-02
NCL 252061000
CC 45-5 (Industrial Organic Chemicals, Leather, Fats, and Waxes)
Section cross-reference(s): 54, 67
IT 173196-27-5P
(manuf. and **sulfonation** of; manuf. of
dialkylbenzenesulfonate collectors useful in ore flotation)
IT 10541-42-1P 37415-47-7P 173196-29-7P
(manuf. and **sulfonation** of; manuf. of
dialkylbenzenesulfonate collectors useful in ore flotation)

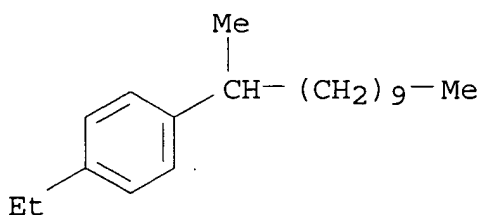
L32 ANSWER 2 OF 2 HCA COPYRIGHT 2003 ACS

113:77807 Sulfonation studies of monoisomeric di- and trialkylbenzenes. Grey, Roger A.; Chan, Albert F. (ARCO Chem. Co., Newton Square, PA, 19073, USA). Journal of the American Oil Chemists' Society, 67(2), 132-41 (English) 1990. CODEN: JAOCA7. ISSN: 0003-021X.

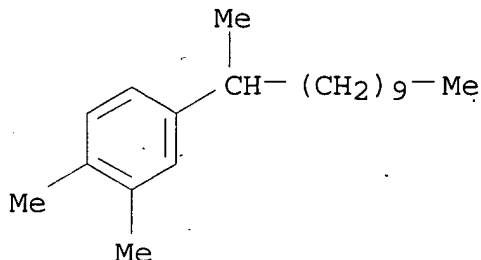
AB Sulfonation of isomerically pure di- and trialkylbenzenes by SO₃ and its Lewis acid adducts tended to occur para to alkyl substituents. In the case of 1-alkyl-3,4-dimethylbenzenes, the selectivity for sulfonation para to the 3-Me group was 87-99% despite steric hindrance by the 1-alkyl group. The position of sulfonation was detd. by a combination of NMR and HPLC methods.

IT 115416-73-4 128591-03-7
(**sulfonation** of, regiochem. of)

RN 115416-73-4 HCA
CN Benzene, 1-ethyl-4-(1-methylundecyl)- (9CI) (CA INDEX NAME)



RN 128591-03-7 HCA
CN Benzene, 1,2-dimethyl-4-(1-methylundecyl)- (9CI) (CA INDEX NAME)



CC 25-13 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
 IT **115416-73-4** 128590-93-2 128590-94-3 128590-95-4
 128590-96-5 128590-97-6 128590-98-7 128590-99-8 128591-00-4
 128591-01-5 128591-02-6 **128591-03-7** 128591-04-8
 128591-05-9 128591-06-0
 (sulfonation of, regiochem. of)

=> d 120 1-7 cbib abs hitstr hitrn

L20 ANSWER 1 OF 7 HCA COPYRIGHT 2003 ACS

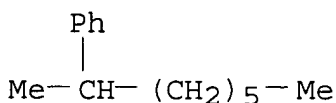
123:338788 Relative reactivities in alkylbenzene sulfonation - a kinetic and mechanistic model. Roberts, D. W. (Unilever Research Port Sunlight Laboratory, Merseyside, L63 3JW, UK). Comunicaciones presentadas a las Jornadas del Comité Espanol de la Detergencia, 26, 369-78 (English) 1995. CODEN: CJCDD7. ISSN: 0212-7466. Publisher: Comité Espanol de la Detergencia, Tensioactivos y Afines.

AB In 1994, Jornadas Cohen, Vergara, Moreno and Berna presented data on the distribution of isomers and homologues in linear alkylbenzenes before sulfonation and in the free oil recovered after sulfonation. From these data relative rate consts. have now been derived for the sulfonation of each of the isomers and homologues. The rate consts. are linearly correlated with structure by a logarithmic function based on the carbon nos. of the two linear alkyl groups R in the alkylbenzene $R_2CHC_6H_5$, and the corresponding terms of the Fibonacci series. The correlation is rationalized in terms of differences in entropy of activation resulting from losses of rotational freedom of bonds in the alkyl chains in going from the starting material to the sulfonation transition state.

IT **777-22-0**, 2-Phenyloctane **2719-61-1**,
 2-Phenyldodecane **4537-13-7**, 2-Phenyldecane
 (kinetic and mechanistic model of relative reactivities in
 alkylbenzene sulfonation)

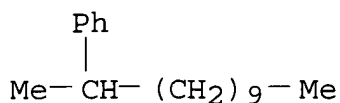
RN 777-22-0 HCA

CN Benzene, (1-methylheptyl)- (9CI) (CA INDEX NAME)



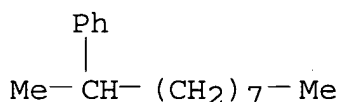
RN 2719-61-1 HCA

CN Benzene, (1-methylundecyl)- (9CI) (CA INDEX NAME)



RN 4537-13-7 HCA

CN Benzene, (1-methylnonyl)- (9CI) (CA INDEX NAME)



IT 777-22-0, 2-Phenyloctane 2719-61-1,
2-Phenyldodecane 4537-13-7, 2-Phenyldecane
(kinetic and mechanistic model of relative reactivities in
alkylbenzene **sulfonation**)

L20 ANSWER 2 OF 7 HCA COPYRIGHT 2003 ACS

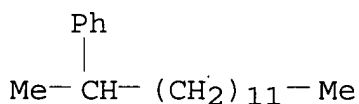
112:141777 Upgrading of linear alkyl benzene by-product. Azim, Abdel;
Wedad, M.; Abou El Naga, H. H.; Naguib, Sidaros K. (Res. Cent., Misr
Pet. Co., Cairo, Egypt). Journal of Chemical Technology and
Biotechnology, 47(1), 61-9 (English) 1990. CODEN: JCTBED. ISSN:
0268-2575.

AB C12-15-alkylated benzene, accumulated as a byproduct of linear alkyl
benzene synthesis, was evaluated for prepn. of anionic liq.
sulfonate surfactants. Liq. surfactant formulations based on these
anionic sulfonates were established by incorporating other necessary
ingredients. The formulations developed showed high efficiency in
detergents, wetting agents, and emulsifiers.

IT 4534-59-2 4534-66-1
(**sulfonation** of arom. fractions contg., in anionic
surfactant prodn.)

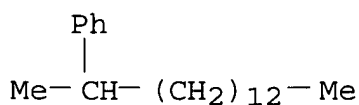
RN 4534-59-2 HCA

CN Benzene, (1-methyltridecyl)- (9CI) (CA INDEX NAME)



RN 4534-66-1 HCA

CN Benzene, (1-methyltetradecyl)- (9CI) (CA INDEX NAME)



IT 4534-59-2 4534-66-1

(sulfonation of arom. fractions contg., in anionic surfactant prodn.)

L20 ANSWER 3 OF 7 HCA COPYRIGHT 2003 ACS

96:52427 Chemistry of higher order, mixed organocuprates. 1. Substitution reactions at unactivated secondary centers. Lipshutz, Bruce H.; Wilhelm, Robert S.; Floyd, David M. (Dep. Chem., Univ. California, Santa Barbara, CA, 93106, USA). Journal of the American Chemical Society, 103(25), 7672-4 (English) 1981. CODEN: JACSAT. ISSN: 0002-7863.

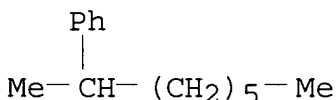
AB Efficient substitution reactions at secondary centers have, for the 1st time, been achieved using higher order, mixed organocuprate complexes. Alkylolithium compds. combined with 2:1 CuCN form a highly reactive intermediate capable of useful coupling with unactivated halides. Side reactions such as redn. and elimination, generally obsd. with Gilman reagents, do not significantly interfere with the coupling step. The effects of leaving group, temp., additives, and RLi reactivity have all been examd. E.g., treating RCHMePr (R = I, Br, Cl, MeSO₃, p-MeC₆H₄SO₃) with Bu₂Cu(CN)Li₂ gave 28-99% BuCHMePr.

IT 777-22-0P

(prepn. of, by reactions of secondary halides or **sulfonates** with organocuprates)

RN 777-22-0 HCA

CN Benzene, (1-methylheptyl)- (9CI) (CA INDEX NAME)



IT 777-22-0P

(prepn. of, by reactions of secondary halides or **sulfonates** with organocuprates)

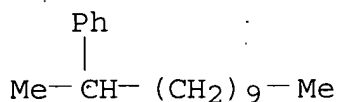
L20 ANSWER 4 OF 7 HCA COPYRIGHT 2003 ACS

63:100042 Original Reference No. 63:18485b-c Sodium alkylbenzenesulfonates. IV. Sulfonation of higher monoalkylbenzenes in relation to structural factor of the alkyl chain. Kimura, Yasushi; Tanimori, Shuhei; Shimo, Terunosuke (Lion Fat Oil Co., Tokyo). Yukagaku, 14(2), 63-6 (Japanese) 1965. CODEN: YKGKAM. ISSN: 0513-398X.

AB The relative rate of sulfonation of linear dodecylbenzenes and n-hexylbenzene by 20% oleum was detd. at 18.degree. by using gas chromatography. The relative rate for linear dodecylbenzenes decreases as the position of aromatic nucleus is located toward the center of the alkyl chain. The rate of this 6-phenyl isomer is about 40% smaller than that of the 1-phenyl isomer. Also, the rate of n-hexylbenzene, having the half-length alkyl chain, is about 60% greater than that of n-dodecylbenzene. In the sulfonation of higher monoalkylbenzenes, there is still a pronounced selectivity owing to the steric hindrance of the alkyl chain. By digesting at 50.degree.,

the above selective sulfonation was eliminated, and some new product with lower b.p. appeared.

IT 2719-61-1, Dodecane, 2-phenyl-
(sulfonation of, kinetics of)
RN 2719-61-1 HCA
CN Benzene, (1-methylundecyl)- (9CI) (CA INDEX NAME)

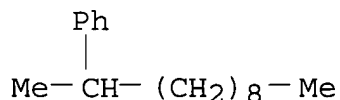


IT 2719-61-1, Dodecane, 2-phenyl-
(sulfonation of, kinetics of)

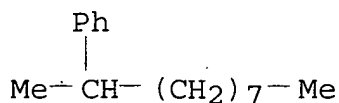
L20 ANSWER 5 OF 7 HCA COPYRIGHT 2003 ACS
62:52643 Original Reference No. 62:9359b-c Structure and performance property relations of straight-chain alkylbenzenes. Pure isomer correlations. Rubinfeld, Joseph; Emery, E. M.; Cross, H. D., III (Colgate-Palmolive Co., Jersey City, NJ). Industrial & Engineering Chemistry Product Research and Development, 4(1), 33-5 (English) 1965. CODEN: IEPRA6. ISSN: 0196-4321.

AB A relation between com. mixts. of straight-chain alkylbenzenes and their ultimate performance as sulfonates in detergent products was established through studies of many pure and nearly pure fractions of isomers. In heavy-duty systems, the optimum performance for 2-Ph sulfonates occurred at chain lengths of C13 and C14 at 50- and 150-ppm. water hardnesses. Sulfonates of the 5-, 6-, and 7-Ph (internal) isomers also peaked at these same chain lengths in 50-ppm., but shifted the optimum to C12 and C13 chains in 150-ppm. hardness. Within the range of optimum chain lengths (C12 to C15), the internal isomers were substantially superior in performance at both hardnesses. For a light-duty formulation, all Ph isomers showed best performance in the C11 to C13 chain lengths. The 2-Ph isomers were most sensitive to hardness in this case, with the internal isomers remaining the superior performers.

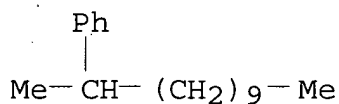
IT 4536-88-3, Undecane, 2-phenyl- 4537-13-7, Decane,
2-phenyl-
(detergency of sulfonates of, structure and)
RN 4536-88-3 HCA
CN Benzene, (1-methyldecyl)- (9CI) (CA INDEX NAME)



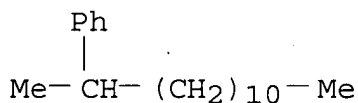
RN 4537-13-7 HCA
CN Benzene, (1-methylnonyl)- (9CI) (CA INDEX NAME)



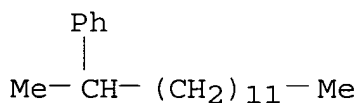
IT 2719-61-1, Dodecane, 2-phenyl- 4534-53-6,
Tridecane, 2-phenyl- 4534-59-2, Tetradecane, 2-phenyl-
4534-66-1, Pentadecane, 2-phenyl- 13419-16-4,
Hexadecane, 2-phenyl-
(detergency of **sulfonates** of, structure of)
RN 2719-61-1 HCA
CN Benzene, (1-methylundecyl)- (9CI) (CA INDEX NAME)



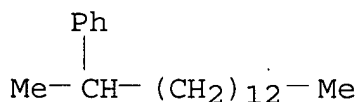
RN 4534-53-6 HCA
CN Benzene, (1-methyldodecyl)- (9CI) (CA INDEX NAME)



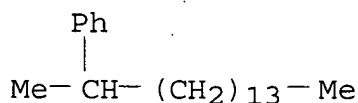
RN 4534-59-2 HCA
CN Benzene, (1-methyltridecyl)- (9CI) (CA INDEX NAME)



RN 4534-66-1 HCA
CN Benzene, (1-methyltetradecyl)- (9CI) (CA INDEX NAME)



RN 13419-16-4 HCA
CN Benzene, (1-methylpentadecyl)- (9CI) (CA INDEX NAME)



IT 4536-88-3, Undecane, 2-phenyl- 4537-13-7, Decane,

2-phenyl-

(detergency of **sulfonates** of, structure and)

IT 2719-61-1, Dodecane, 2-phenyl- 4534-53-6,
Tridecane, 2-phenyl- 4534-59-2, Tetradecane, 2-phenyl-
4534-66-1, Pentadecane, 2-phenyl- 13419-16-4,
Hexadecane, 2-phenyl-
(detergency of **sulfonates** of, structure of)

L20 ANSWER 6 OF 7 HCA COPYRIGHT 2003 ACS

60:45474 Original Reference No. 60:7946h Sulfonation of alkylaromatic hydrocarbons. Faingol'd, S. I.; Korv, M. I.; Tomson, T. V. Masloboino-Zhirovaya Promyshlennost, 29(9), 23-6 (Unavailable) 1963. CODEN: MAZHA8. ISSN: 0368-8712.

AB Optimum conditions for sulfonation of alkylaromatic hydrocarbons found are: concn. of oleum, 20%; ratio of hydrocarbon to oleum, 1.25:1; time and temp., 1 hr. 10.degree., and then 1 hr. at 20-5.degree.; min. amt. unreacted hydrocarbon in final sulfonate, 2-3% (on drying this decreases to 1%). The longer the alkyl chain, the more difficult is the sulfonation.

IT 777-22-0, Octane, 2-phenyl- 2719-61-1, Dodecane,
2-phenyl- 4537-13-7, Decane, 2-phenyl-
(**sulfonation** of)

RN 777-22-0 HCA

CN Benzene, (1-methylheptyl)- (9CI) (CA INDEX NAME)

Ph

Me-CH-(CH₂)₅-Me

RN 2719-61-1 HCA

CN Benzene, (1-methylundecyl)- (9CI) (CA INDEX NAME)

Ph

Me-CH-(CH₂)₉-Me

RN 4537-13-7 HCA

CN Benzene, (1-methylnonyl)- (9CI) (CA INDEX NAME)

Ph

Me-CH-(CH₂)₇-Me

IT 777-22-0, Octane, 2-phenyl- 2719-61-1, Dodecane,
2-phenyl- 4537-13-7, Decane, 2-phenyl-
(**sulfonation** of)

L20 ANSWER 7 OF 7 HCA COPYRIGHT 2003 ACS

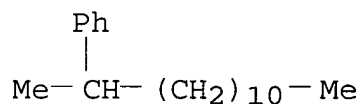
55:99206 Original Reference No. 55:18645i,18646a-h Distribution of para

and ortho isomers in model long chain alkylbenzenesulfonates. Gray, Frederick W.; Krems, Irving J. (Colgate-Palmolive Co., Jersey City, NJ). Journal of Organic Chemistry, 26, 209-12 (Unavailable) 1961. CODEN: JOCEAH. ISSN: 0022-3263.

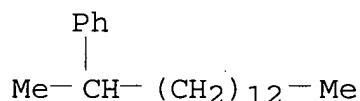
AB A series of long chain 1-phenyl- and 2-phenylalkanes was prepd. $\text{Me}(\text{CH}_2)_n\text{CH}_2\text{Ph}$ ($n = 6, 8, 10$) (I-III) were prepd. by condensing octanoic, decanoic, and dodecanoic acid chlorides with C_6H_6 under Friedel-Crafts conditions and redn. of the ketones by Wolff-Kishner reaction. $\text{Me}(\text{CH}_2)_n\text{CHMePh}$ ($n = 8, 10, 12, 14$) (IV-VII) were obtained by conversion of the appropriate fatty acids to acid chlorides, formation of phenyl ketones, treatment with Grignard reagent and hydrolysis, dehydration of the tertiary alcs. and hydrogenation of the phenylalkenes. $\text{PhCMe}_2\text{CH}_2\text{Cl}$ (75.5 g.) added in 3 hrs. to 12.0 g. Mg in 425 ml. Et_2O , 50 g. octanal in 75 ml. Et_2O added in 35 min., the mixt. refluxed 2 hrs., kept 16 hrs. at 20.degree., poured into 500 ml. cold H_2O and acidified with HCl , the washed (5% aq. NaHCO_3) Et_2O layer evapd., the residue heated 2 hrs. at 200-90.degree. with KHSO_4 , and the filtered soln. distd. gave 64 g. material, b.p. 111.degree.. The mixt. (40 g.) hydrogenated 4 hrs. at 20.degree./1-3 atm. in 200 g. AcOH with 0.4 g. 5% Pd-C, the filtered soln. distd. at 128-30.degree./1.5-2.0 mm., the product (35.5 g.) washed 3 times with 96% H_2SO_4 and once with NaHCO_3 and redistd. at 123.degree./1 mm. gave 27.2 g. $\text{Me}(\text{CH}_2)_8\text{CPhMe}_2$ (VIII). The phys. properties of the alkylbenzenes used for sulfonation are listed (alkylbenzene, b.p./mm., d_{25} , and n_{25D} given): I, 87-8.degree./1.0, 0.8541, 1.4825; II, 112.degree./1.0, 0.8520, 1.4812; III, 148.degree./1.0, -, 1.4818 (at 20.degree.); IV, 92.4.degree./0.2, 0.8507, 1.4804; V, 132-3.degree./0.8, 0.8612, 1.4794; VI, 192.degree./5.0, 0.8577, 1.4796; VII, 156-8.degree./0.8, 0.8522, 1.4782; VIII, 123.degree./1.0, 0.8599, 1.4848. $\text{PhCMe}_2\text{CH}_2\text{MgCl}$ and $\text{Me}(\text{CH}_2)_6\text{CHO}$ condensed as above, the product hydrolyzed in cold dil. aq. soln., extd. with Et_2O , and the dried product distd. at 150-5.degree./1.5 mm. yielded 76% $\text{Me}_2\text{CPhCH}_2\text{CH}(\text{OH})(\text{CH}_2)_6\text{Me}$, d_{25} 0.9234, n_{25D} 1.5010, dehydrated with KHSO_4 and reduced to VIII. I-VII were sulfonated in about 98% yields with 20% oleum, neutralized with NaOH , extd. with Et_2O , the inorg. salt removed and the ortho-para isomers isolated to give the tabulated yields (alkylbenzene, % yield of sulfonated product, isomer distribution in % para and % ortho given): I, 98, 81, 15; II, 99, 80, 15; III, 98, 81, 14; IV, 99, 86, 7; V, 98, 91, 6; VI, 98, 90, 7; VII, 98, 89, 7. The para sulfonates of I-III exhibited a doublet at 11.90, 12.28 μ . Ortho sulfonates had a single band at 13.36 μ . In IV-VII para and ortho absorption occurred at 12.00 and 13.12 μ , resp. The isomers were also identified by the m.ps. of the S-benzylisothiuronium salts (starting hydrocarbon, m.p. of para and ortho isomers given): I, 125.6-5.8.degree., 98-9.degree.; II, 94.2-5.3.degree., 113-14.degree.; III, 117-18.degree., 101-3.degree.; IV, 104.0-4.4.degree., 108.6-9.degree.; V, 105.9-6.2.degree., 86-6.5.degree.; VI, 106-6.9.degree., 113.7-15.degree.; VII, 109-9.4.degree., 92.2-3.2.degree.. All m.ps. were taken after drying at least 6 hrs. over P_2O_5 at 78.degree./2 mm. VIII sulfonated with 20% oleum, the mixt. neutralized with

NaOH, dried and extd. with dry Et₂O, the soln. partitioned between equal vols. of H₂O and Et₂O, the H₂O layer evapd. to give 80% Na (1,1-dimethyldodecyl)benzene sulfonate (IX); 10.0 g. product recrystd. from 100 ml. H₂O gave 7.8 g. cryst. material, 12.00, 13.12 .mu., contg. a single component with 5.5% soly. in H₂O at 46.5.degree.; S-benzylisothiuronium deriv. m. 126-8.degree.. The para sulfonates were superior in detergency but inferior in wetting action to their respective ortho isomers. Para rather than ortho substitution tended generally to favor better foaming action. IX had over-all surface-active properties closely resembling those of com. Na tetrapropylenebenzenesulfonate and its wetting ability was superior to that of the Na p-sulfonates of I-VII.

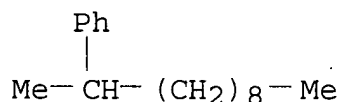
IT 4534-53-6, Tridecane, 2-phenyl- 4534-66-1,
Pentadecane, 2-phenyl- 4536-88-3, Undecane, 2-phenyl-
55125-25-2, Heptadecane, 2-phenyl-
(prepn. and **sulfonation** of)
RN 4534-53-6 HCA
CN Benzene, (1-methyldodecyl)- (9CI) (CA INDEX NAME)



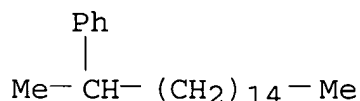
RN 4534-66-1 HCA
CN Benzene, (1-methyltetradecyl)- (9CI) (CA INDEX NAME)



RN 4536-88-3 HCA
CN Benzene, (1-methyldodecyl)- (9CI) (CA INDEX NAME)



RN 55125-25-2 HCA
CN Benzene, (1-methylhexadecyl)- (9CI) (CA INDEX NAME)



IT 4534-53-6, Tridecane, 2-phenyl- 4534-66-1,
Pentadecane, 2-phenyl- 4536-88-3, Undecane, 2-phenyl-
55125-25-2, Heptadecane, 2-phenyl-
(prepn. and **sulfonation** of)

=> d 121 1-85 ti

- L21 ANSWER 1 OF 85 HCA COPYRIGHT 2003 ACS
TI Anaerobic treatment of sludge: focusing on reduction of LAS concentration in sludge
- L21 ANSWER 2 OF 85 HCA COPYRIGHT 2003 ACS
TI Bioaccumulation of LAS in Feral Fish Studied by a Novel LC-MS/MS Method
- L21 ANSWER 3 OF 85 HCA COPYRIGHT 2003 ACS
TI Polypyrrole Doped with Alkyl Benzenesulfonates
- L21 ANSWER 4 OF 85 HCA COPYRIGHT 2003 ACS
TI Technology useful in combination with antenna dyes
- L21 ANSWER 5 OF 85 HCA COPYRIGHT 2003 ACS
TI Properties of polypyrrole doped with alkylbenzene sulfonates
- L21 ANSWER 6 OF 85 HCA COPYRIGHT 2003 ACS
TI Use of isomer distributions to characterize the environmental fate of LAS
- L21 ANSWER 7 OF 85 HCA COPYRIGHT 2003 ACS
TI Toxicity of linear alkylbenzene sulfonates and nonylphenol in sludge-amended soil
- L21 ANSWER 8 OF 85 HCA COPYRIGHT 2003 ACS
TI Photographic elements with yellow dye-forming coupler and stabilizing compounds
- L21 ANSWER 9 OF 85 HCA COPYRIGHT 2003 ACS
TI Scavenger free photographic silver halide print media
- L21 ANSWER 10 OF 85 HCA COPYRIGHT 2003 ACS
TI Silver halide color photographic multilayer paper with reflective support suitable for digital printing
- L21 ANSWER 11 OF 85 HCA COPYRIGHT 2003 ACS
TI Color photographic element containing a fragmentable electron donor in combination with a one equivalent coupler for improved photographic response
- L21 ANSWER 12 OF 85 HCA COPYRIGHT 2003 ACS
TI The Relationship between the Interfacial Properties of Surfactants and Their Toxicity to Aquatic Organisms
- L21 ANSWER 13 OF 85 HCA COPYRIGHT 2003 ACS
TI Evaluation of an inactivation procedure for determining the sorption of organic compounds to activated sludge

- L21 ANSWER 14 OF 85 HCA COPYRIGHT 2003 ACS
TI Quantification of in vivo biotransformation of the anionic surfactant C12-2-linear alkylbenzene sulfonate in fathead minnows
- L21 ANSWER 15 OF 85 HCA COPYRIGHT 2003 ACS
TI Possible interactions within a methanotrophic-heterotrophic groundwater community able to transform linear alkylbenzenesulfonates
- L21 ANSWER 16 OF 85 HCA COPYRIGHT 2003 ACS
TI Color paper with exceptional reciprocity performance
- L21 ANSWER 17 OF 85 HCA COPYRIGHT 2003 ACS
TI Monitoring volume expansion in PPy(DBS) with AFM. Effects of DBS isomers
- L21 ANSWER 18 OF 85 HCA COPYRIGHT 2003 ACS
TI Photographic recording material for accelerated development
- L21 ANSWER 19 OF 85 HCA COPYRIGHT 2003 ACS
TI Occurrence and concentrations of aromatic surfactants and their degradation products in river waters of Taiwan
- L21 ANSWER 20 OF 85 HCA COPYRIGHT 2003 ACS
TI Copolymer latexes and their paper coating compositions
- L21 ANSWER 21 OF 85 HCA COPYRIGHT 2003 ACS
TI Bioconcentration of LAS: Experimental Determination and Extrapolation to Environmental Mixtures
- L21 ANSWER 22 OF 85 HCA COPYRIGHT 2003 ACS
TI ¹H NMR studies on aggregation-induced conformational changes in linear alkylbenzenesulfonates
- L21 ANSWER 23 OF 85 HCA COPYRIGHT 2003 ACS
TI Cometabolic transformation of linear alkylbenzenesulfonates by methanotrophs
- L21 ANSWER 24 OF 85 HCA COPYRIGHT 2003 ACS
TI Method for forming photographic dispersions comprising loaded latex polymers
- L21 ANSWER 25 OF 85 HCA COPYRIGHT 2003 ACS
TI Method for preparing photographic elements comprising loaded latex compositions
- L21 ANSWER 26 OF 85 HCA COPYRIGHT 2003 ACS
TI Molecular Dynamics Simulations of a Calcium Carbonate/Calcium Sulfonate Reverse Micelle
- L21 ANSWER 27 OF 85 HCA COPYRIGHT 2003 ACS

- TI Process for preparing a silver halide photographic emulsion sensitized in the presence of hydroquinone derivatives
- L21 ANSWER 28 OF 85 HCA COPYRIGHT 2003 ACS
TI Photographic composition containing a thickening agent.
- L21 ANSWER 29 OF 85 HCA COPYRIGHT 2003 ACS
TI ¹H NMR Investigations of the Interactions between Anionic Surfactants and Hydrophobically Modified Poly(acrylamide)s
- L21 ANSWER 30 OF 85 HCA COPYRIGHT 2003 ACS
TI Desulfonation of linear alkylbenzenesulfonate surfactants and related compounds by bacteria
- L21 ANSWER 31 OF 85 HCA COPYRIGHT 2003 ACS
TI Micelle formation of sodium alkylarenesulfonates according to the equilibrium model
- L21 ANSWER 32 OF 85 HCA COPYRIGHT 2003 ACS
TI Surfactant adsorption at liquid/liquid interfaces Comparison of experimental results with self-consistent field lattice calculations and molecular dynamics simulations
- L21 ANSWER 33 OF 85 HCA COPYRIGHT 2003 ACS
TI Effect of some surface properties on fungicidal activity of some derivatives of dodecylbenzene sulfonic acid
- L21 ANSWER 34 OF 85 HCA COPYRIGHT 2003 ACS
TI The effect of chemical structure upon the thermodynamics of micellization of model alkylarenesulfonates. Prediction of micellar properties with the Poisson-Boltzmann model
- L21 ANSWER 35 OF 85 HCA COPYRIGHT 2003 ACS
TI Predictions of the Poisson-Boltzmann equation for sodium alkylbenzenesulfonate micelles
- L21 ANSWER 36 OF 85 HCA COPYRIGHT 2003 ACS
TI Alkylarenesulfonates: the effect of chemical structure on physicochemical properties
- L21 ANSWER 37 OF 85 HCA COPYRIGHT 2003 ACS
TI Thermal stability and degradation mechanism of alkylbenzenesulfonates in alkaline media
- L21 ANSWER 38 OF 85 HCA COPYRIGHT 2003 ACS
TI Excimer-monomer emission in alkylbenzenesulfonate dispersions: effect of the surfactant structure on aggregation
- L21 ANSWER 39 OF 85 HCA COPYRIGHT 2003 ACS
TI The effect of chemical structure upon the thermodynamics of micellization of model alkylarenesulfonates. III. Determination of the critical micelle concentration and the enthalpy of

demicellization by means of microcalorimetry and a comparison with the phase separation model

- L21 ANSWER 40 OF 85 HCA COPYRIGHT 2003 ACS
TI A structure-activity relationship for linear alkylbenzene sulfonate (LAS) initial biodegradation kinetics
- L21 ANSWER 41 OF 85 HCA COPYRIGHT 2003 ACS
TI Structure-activity relationships for biodegradation of linear alkylbenzenesulfonates
- L21 ANSWER 42 OF 85 HCA COPYRIGHT 2003 ACS
TI Synergism in mixtures of anionic and nonionic surfactants
- L21 ANSWER 43 OF 85 HCA COPYRIGHT 2003 ACS
TI Biodegradation kinetics of linear alkylbenzenesulfonate in sludge-amended agricultural soils
- L21 ANSWER 44 OF 85 HCA COPYRIGHT 2003 ACS
TI The effect of surfactant structure on the rate of oil solubilization into aqueous surfactant solutions
- L21 ANSWER 45 OF 85 HCA COPYRIGHT 2003 ACS
TI Liquid-flow microcalorimetry of surfactant adsorption onto sandstone. 1. Experimental method and initial results
- L21 ANSWER 46 OF 85 HCA COPYRIGHT 2003 ACS
TI Determination of alkylbenzene surfactants in groundwater using macroreticular resins and carbon-13 nuclear magnetic resonance spectrometry
- L21 ANSWER 47 OF 85 HCA COPYRIGHT 2003 ACS
TI Effect of rare earth cations on bactericidal activity of anionic surfactants
- L21 ANSWER 48 OF 85 HCA COPYRIGHT 2003 ACS
TI The effect of chemical structure upon the thermodynamics of micellization of model alkylarenesulfonates. I. Sodium p-(x-decyl)benzenesulfonate isomers
- L21 ANSWER 49 OF 85 HCA COPYRIGHT 2003 ACS
TI Structure-activity relationships for sorption of linear alkylbenzenesulfonates
- L21 ANSWER 50 OF 85 HCA COPYRIGHT 2003 ACS
TI Photothermographic photosensitive materials
- L21 ANSWER 51 OF 85 HCA COPYRIGHT 2003 ACS
TI Surfactant-like material in a hydrophilic layer adjacent a stripping layer for diffusion transfer assemblages
- L21 ANSWER 52 OF 85 HCA COPYRIGHT 2003 ACS

- TI Micellization behavior of intra-position sodium p-alkylbenzenesulfonates
- L21 ANSWER 53 OF 85 HCA COPYRIGHT 2003 ACS
- TI Multicolor photographic elements containing silver iodide grains
- L21 ANSWER 54 OF 85 HCA COPYRIGHT 2003 ACS
- TI Properties of binary mixtures of anionic and cationic surfactants: micellization and microemulsions
- L21 ANSWER 55 OF 85 HCA COPYRIGHT 2003 ACS
- TI Multicolor photographic elements containing silver iodide grains
- L21 ANSWER 56 OF 85 HCA COPYRIGHT 2003 ACS
- TI Enthalpies of dilution and heat capacities of aqueous solutions of sodium n-dodecylsulfonate and sodium 4-(1-methylundecyl)benzenesulfonate from 347 to 451.degree.K
- L21 ANSWER 57 OF 85 HCA COPYRIGHT 2003 ACS
- TI Criteria for structuring surfactants to maximize solubilization of oil and water. II. Alkyl benzene sodium sulfonates
- L21 ANSWER 58 OF 85 HCA COPYRIGHT 2003 ACS
- TI Germicide composition for sterilizing hard-surface objects
- L21 ANSWER 59 OF 85 HCA COPYRIGHT 2003 ACS
- TI Oxidative desizing agent
- L21 ANSWER 60 OF 85 HCA COPYRIGHT 2003 ACS
- TI Precipitation of alkylbenzene sulfonates with metal ions
- L21 ANSWER 61 OF 85 HCA COPYRIGHT 2003 ACS
- TI Primary and total biodegradation of linear alkylbenzenesulfonates
- L21 ANSWER 62 OF 85 HCA COPYRIGHT 2003 ACS
- TI Polarographic determination of some linear alkylbenzene sulfonates
- L21 ANSWER 63 OF 85 HCA COPYRIGHT 2003 ACS
- TI Low interfacial tensions involving mixtures of surfactants
- L21 ANSWER 64 OF 85 HCA COPYRIGHT 2003 ACS
- TI Radical initiators
- L21 ANSWER 65 OF 85 HCA COPYRIGHT 2003 ACS
- TI Microbial degradation of phenylalkanes. 1- and 2-Phenyldodecane and 2- and 3-phenyldodecane-p-sulfonates
- L21 ANSWER 66 OF 85 HCA COPYRIGHT 2003 ACS
- TI Adsorption of alkylbenzenesulfonate surfactants at the alumina-water interface
- L21 ANSWER 67 OF 85 HCA COPYRIGHT 2003 ACS

- TI Photographic films having carbon-containing backing layers
- L21 ANSWER 68 OF 85 HCA COPYRIGHT 2003 ACS
TI Course of biodegradation of anionic detergents by analyses for carbon, methylene blue active substance and sulfate ion
- L21 ANSWER 69 OF 85 HCA COPYRIGHT 2003 ACS
TI Dyeing of fibrous natural and synthetic polyamides
- L21 ANSWER 70 OF 85 HCA COPYRIGHT 2003 ACS
TI Secondary valence force catalysis. VIII. Catalysis of hydrolysis of methyl orthobenzoate by anionic surfactants
- L21 ANSWER 71 OF 85 HCA COPYRIGHT 2003 ACS
TI Metabolism of arenesulfonates by microorganisms
- L21 ANSWER 72 OF 85 HCA COPYRIGHT 2003 ACS
TI Metabolism of some anionic tallow-based detergents by sewage microorganisms
- L21 ANSWER 73 OF 85 HCA COPYRIGHT 2003 ACS
TI Structural characterization and surfactant properties of some alkyl aryl products based on fats
- L21 ANSWER 74 OF 85 HCA COPYRIGHT 2003 ACS
TI Aqueous dispersions of polyethylene
- L21 ANSWER 75 OF 85 HCA COPYRIGHT 2003 ACS
TI Isomeric linear phenylalkanes and sodium alkylbenzenesulfonates
- L21 ANSWER 76 OF 85 HCA COPYRIGHT 2003 ACS
TI Emulsions for direct positive color images
- L21 ANSWER 77 OF 85 HCA COPYRIGHT 2003 ACS
TI Detersive properties of model straight chain sodium alkyl-benzenesulfonates
- L21 ANSWER 78 OF 85 HCA COPYRIGHT 2003 ACS
TI Effects of structural variations in ionic surfactants on phytotoxicity and physical-chemical properties of aqueous sprays of several herbicides
- L21 ANSWER 79 OF 85 HCA COPYRIGHT 2003 ACS
TI Relations between constitution and surface activity of alkyl-arenesulfonates. IV
- L21 ANSWER 80 OF 85 HCA COPYRIGHT 2003 ACS
TI Sulfonation of alkylphenols
- L21 ANSWER 81 OF 85 HCA COPYRIGHT 2003 ACS
TI Relation between constitution and surface activity of alkylarenesulfonates. III. Measurements on aqueous solutions of

(1-7)-phenyl-n-tetradecane-p-sulfonate, (2-7)-benzyl-n-tridecane-p-sulfonate, and p-di-n-alkylbenzenesulfonates containing a total of 14 carbon atoms in the side chains

L21 ANSWER 82 OF 85 HCA COPYRIGHT 2003 ACS

TI Relationships between constitution and surface-active properties of alkylarenesulfonates. II. Preparation of tetradecanes, (1-7)-(p-sulfophenyl), (2-7)-(p-sulfobenzyl)tridecanes, and isomeric 2,5-di-n-alkylbenzenesulfonates with 14 carbon atoms in the combined alkyl chains

L21 ANSWER 83 OF 85 HCA COPYRIGHT 2003 ACS

TI Film drainage; the visual aspects of foam

L21 ANSWER 84 OF 85 HCA COPYRIGHT 2003 ACS

TI Dependence of surface-active and detergent properties of alkylbenzenesulfonates on the length and structure of the alkyl chain

L21 ANSWER 85 OF 85 HCA COPYRIGHT 2003 ACS

TI Physicochemical properties of solutions of para long-chain alkylbenzenesulfonates

=> d 121

1,7,9,10,18,20,25,28,42,44,50,53,58,59,63,64,69,73,75,76,77,78,80,84,85
cbib abs hitstr hitrn

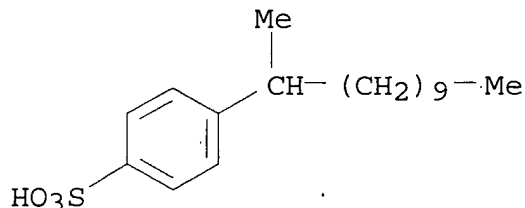
L21 ANSWER 1 OF 85 HCA COPYRIGHT 2003 ACS

138:259598 Anaerobic treatment of sludge: focusing on reduction of LAS concentration in sludge. Haggensen, F.; Mogensen, A. S.; Angelidaki, I.; Ahring, B. K. (Biocentrum-DTU, Technical University of Denmark, Lyngby, 2800, Den.). Water Science and Technology, 46(10, Sludge Management: Regulation, Treatment, Utilisation and Disposal), 159-165 (English) 2002. CODEN: WSTED4. ISSN: 0273-1223. Publisher: IWA Publishing.

AB Anaerobic degrdn. of linear alkylbenzene sulfonates (LAS) was tested in continuous stirred tank reactors (CSTR). LAS12 was used as a model compd. and was spiked on sewage sludge. The expts. clearly showed that transformation of LAS12 occurred under anaerobic conditions. The degree of transformation varied between 14% and 25%. HPLC anal. showed that disappearance of LAS12 was followed by the formation of a metabolite. The expts. indicated that there is a clear correlation between degrdn. of org. matter contained in sludge and transformation of LAS12. When the redn. degree of the org. matter increased from 22% to 28%, the transformation degree of LAS12 also increased, from 14% to 20%. Decreasing the total solids concn. of the influent sludge or increasing the spiked concn. of LAS12 did not alter the degree of LAS12 transformation significantly. A clear correlation between transformed and bioavailable LAS12 was found, indicating that it is merely the bioavailable fraction of LAS12 that is transformed by anaerobic digestion. The results from the present

study are promising and indicate that a great potential for biol. degrdn. of LAS is possible even under anaerobic conditions.

IT 2211-99-6
 (removal of linear alkylbenzene sulfonate in anaerobic treatment of sludge)
 RN 2211-99-6 HCA
 CN Benzenesulfonic acid, 4-(1-methylundecyl)-, sodium salt (9CI) (CA INDEX NAME)



● Na

IT 2211-99-6
 (removal of linear alkylbenzene sulfonate in anaerobic treatment of sludge)

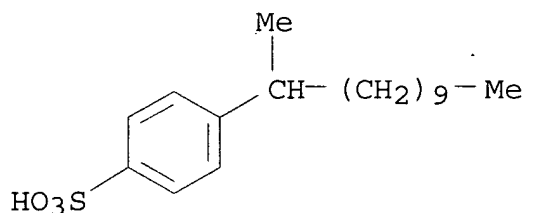
L21 ANSWER 7 OF 85 HCA COPYRIGHT 2003 ACS

136:130033 Toxicity of linear alkylbenzene sulfonates and nonylphenol in sludge-amended soil. Gejlsbjerg, Bo; Klinge, Charlotte; Samsoe-Petersen, Lise; Madsen, Torben (Department of Ecotoxicology, DHI Water and Environment, Horsholm, DK 2970, Den.). Environmental Toxicology and Chemistry, 20(12), 2709-2716 (English) 2001. CODEN: ETOCDK. ISSN: 0730-7268. Publisher: SETAC Press.

AB The application of sewage sludge to agricultural land brings several chems. to the soil ecosystem. Linear alkylbenzenesulfonates (LAS) and nonylphenol (NP) are frequently found in sludge at relatively high concns. The toxic effects of LAS and NP to two soil invertebrates (*Folsomia candida* and *Enchytraeus albidus*) and five different microbial processes (aerobic respiration, nitrification, denitrification, anaerobic CH₄ prodn., and anaerobic CO₂ prodn.) were investigated in sludge-soil mixts. Median lethal concns. (LC₅₀ values) and median effective concns. (EC₅₀ values) were quite similar and calcd. to be in the range of 1,143 to 1,437 and 71 to 437 mg/kg (dry wt.) for LAS and NP, resp. The EC₅₀ values for nitrification and CH₄ prodn. were 431 and 277 mg/kg, resp., for LAS and 343 and 754 mg/kg, resp., for NP. Aerobic respiration and denitrification were not inhibited at the tested concns. The results show that NP was more toxic than LAS to both *F. candida* and *E. albidus*, whereas LAS was more toxic than NP to the anaerobic CH₄ prodn. The safety margins between the lowest 10% effective concn. (EC₁₀) and the estd. environmental concn. were a factor of 11 for LAS and 510 for NP when the concns. of the contaminants corresponded

to the current Danish cutoff values of 1,300 mg/kg for LAS and 30 mg/kg for NP.

IT 2211-99-6
 (toxicity of linear alkylbenzenesulfonate in sludge-amended soil)
 RN 2211-99-6 HCA
 CN Benzenesulfonic acid, 4-(1-methylundecyl)-, sodium salt (9CI) (CA INDEX NAME)



● Na

IT 2211-99-6
 (toxicity of linear alkylbenzenesulfonate in sludge-amended soil)

L21 ANSWER 9 OF 85 HCA COPYRIGHT 2003 ACS

135:114416 Scavenger free photographic silver halide print media. Roberts, Michael Richard; McSweeney, Gary John; Camp, Alphonse Dominic (Eastman Kodak Company, USA). Eur. Pat. Appl. EP 1116994 A2 20010718, 55 pp. DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO. (English). CODEN: EPXXDW. APPLICATION: EP 2000-204546 20001215. PRIORITY: US 1999-472578 19991227.

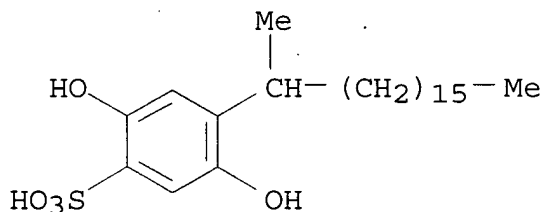
AB The invention relates to photog. silver halide media and to a multilayer coating structure that provides improved keeping properties and more efficient use of silver for digital exposures. The invention relates to a multilayer photog. element comprising a reflective support wherein the color record 1 adjacent to the support comprises .gtoreq.1 light sensitive layer and a non-light sensitive dye-forming interlayer; and wherein color record 2 above the color record 1 comprises .gtoreq.1 light sensitive layer and .gtoreq.2 non-light sensitive dye-forming interlayers and wherein color record 3 comprises .gtoreq.1 light sensitive layer and a non-light sensitive dye-forming interlayer; an optional UV dye contg. interlayer and a top overcoat; and wherein each interlayer is completely or substantially scavenger free, Ag halide grains comprising >90% AgCl, and wherein the reciprocity characteristics of the Ag halide grains are such that for a sepn. exposure of 1 .mu.s and 0.4 s, each color record develops to a d. of at least 2.0 within a log exposure range of 1.2 or less relative to the exposure point producing a d. 0.04 above Dmin.

IT 99217-03-5
 (scavenger free photog. silver halide print medium having

multilayer coating for efficient digital exposure and contg.)

RN 99217-03-5 HCA

CN Benzenesulfonic acid, 2,5-dihydroxy-4-(1-methylheptadecyl)-, monopotassium salt (9CI) (CA INDEX NAME)



● K

IT 99217-03-5

(scavenger free photog. silver halide print medium having multilayer coating for efficient digital exposure and contg.)

L21 ANSWER 10 OF 85 HCA COPYRIGHT 2003 ACS

135:84216 Silver halide color photographic multilayer paper with reflective support suitable for digital printing. Roberts, Michael Richard (Eastman Kodak Co., USA). Ger. Offen. DE 10063212 A1 20010628, 54 pp. (German). CODEN: GWXXBX. APPLICATION: DE 2000-10063212 20001219. PRIORITY: US 1999-472576 19991227.

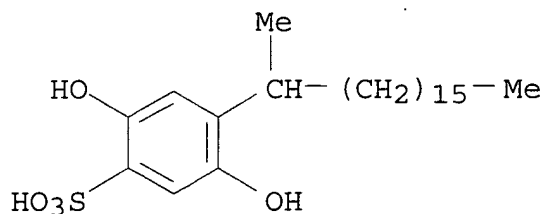
AB The invention relates to a multilayer type Ag halide photog. paper contg. UV absorbing materials, wherein the photog. paper includes a polymer-coated paper substrate, light-sensitive layers, light-insensitive layers, and intermediate layers so that specified photog. characteristics (exposure-d. relations) can be obtained. The photog. paper may contain a pyrazolotriazole magenta coupler. The photog. Ag halide grains may contain Ir coordination complexes. The photog. paper may contain hindered amine stabilizers. The photog. paper produces improved print quality.

IT 99217-03-5

(stabilizer in Ag halide color photog. multilayer paper with reflective support suitable for digital printing)

RN 99217-03-5 HCA

CN Benzenesulfonic acid, 2,5-dihydroxy-4-(1-methylheptadecyl)-, monopotassium salt (9CI) (CA INDEX NAME)



● K

IT 99217-03-5

(stabilizer in Ag halide color photog. multilayer paper with reflective support suitable for digital printing)

L21 ANSWER 18 OF 85 HCA COPYRIGHT 2003 ACS

133:81527 Photographic recording material for accelerated development. Friday, James A.; Lunt, Sharon R.; Sutton, Scott C. (Eastman Kodak Company, USA). Eur. Pat. Appl. EP 1016912 A2. 20000705, 45 pp. DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO. (English). CODEN: EPXXDW. APPLICATION: EP 1999-204272 19991213. PRIORITY: US 1998-224230 19981230.

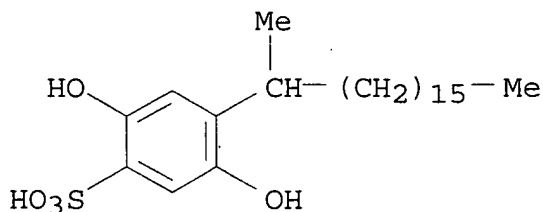
AB This invention relates to a photog. element comprising a support and .gtoreq.2 Ag halide emulsion layers wherein .gtoreq.1 emulsion layer contains an electron transfer agent releasing compd. represented by the formula: CAR-(L)n-ETA wherein: CAR is a carrier moiety which is capable of releasing and -(L)n-ETA on reaction with oxidized developing agent; L is a divalent linking group, n is 0, 1 or 2; and ETA is a releasable 1-aryl-3-pyrazolidinone electron transfer agent having a calcd. log partition coeff. (c log P) greater than or equal to 2.40 bonded to L or CAR through either the N atom in the 2-position or the O attached to the 3-position of the pyrazolidinone ring; and .gtoreq.1 sol mercaptan releasing compd.

IT 173923-82-5

(fast-developing photog. recording films made of multiple layers contg.)

RN 173923-82-5 HCA

CN Benzenesulfonic acid, 2,5-dihydroxy-4-(1-methylheptadecyl)- (9CI)
(CA INDEX NAME)



IT 173923-82-5

(fast-developing photog. recording films made of multiple layers contg.)

L21 ANSWER 20 OF 85 HCA COPYRIGHT 2003 ACS

129:190054 Copolymer latexes and their paper coating compositions. Kurita, Osamu; Ishikawa, Satoru; Tsuruoka, Katsuhiko (JSR Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 10195244 A2 19980728 Heisei, 8 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1997-17804 19970116.

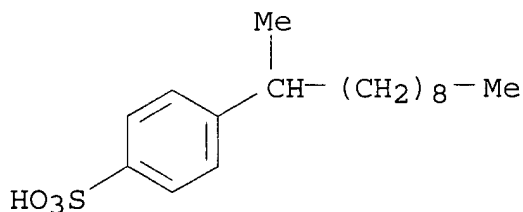
AB Title latexes are prepd. by copolymer. of aliph. conjugated dienes 20-70, ethylenic unsatd. carboxylic acids 0.5-7, and other vinyl compds. 3-73% in the presence of emulsifiers contg. 50-95% alkylbenzenesulfonates R1R2CHC6H4SO3M (I; R1 = C3-6 alkyl; R2 = C6-7 alkyl; M = K, Na, NH4). Polymg. acrylonitrile 10, 1,3-butadiene 40, fumaric acid 2, itaconic acid 1, Me methacrylate 10, and styrene 37 parts in an aq. soln. contg. K2S2O8 1, Na laurate 0.2, a 20:80 I (R1 = Me, R2 = n-C9H19, M = Na) and I (R1 = Et, R2 = n-C9H19, M = Na) blend 0.2, and a 20:20:30:30 I (R1 = Pr, R2 = n-C8H17, M = Na), I (R1 = n-C5H11, R2 = n-C6H13, M = Na), I (R1 = Pr, R2 = n-C7H15, M = Na), and I (R1, R2 = n-C5H11, M = Na) blend 0.6 parts at 65.degree. for 20 h gave a polymer latex, which was mixed with water and additives to form a compn. (A). The A-coated paper showed good ink-receiving ability, blocking resistance, surface strength, and water cleanability.

IT 6183-51-3

(prepn. of carboxy-contg. acrylic butadiene styrene polymer latexes in presence of alkylbenzenesulfonate emulsifiers for paper coatings)

RN 6183-51-3 HCA

CN Benzenesulfonic acid, 4-(1-methyldecyl)-, sodium salt (9CI) (CA INDEX NAME)



● Na

IT 6183-51-3

(prepn. of carboxy-contg. acrylic butadiene styrene polymer latexes in presence of alkylbenzenesulfonate emulsifiers for paper coatings)

L21 ANSWER 25 OF 85 HCA COPYRIGHT 2003 ACS

125:288665 Method for preparing photographic elements comprising loaded latex compositions. Nielsen, Ralph Bendt; Rosiek, Thomas Arthur; Honan, James Stephen (Eastman Kodak Company, USA). Eur. Pat. Appl. EP 727703 A1 19960821, 55 pp. DESIGNATED STATES: R: DE, FR, GB. (English). CODEN: EPXXDW. APPLICATION: EP 1996-101413 19960201. PRIORITY: US 1995-390722 19950217.

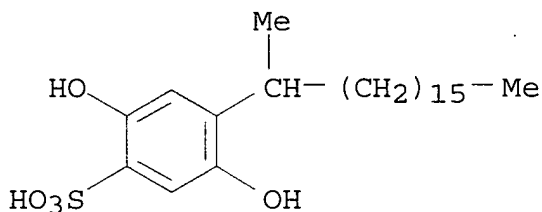
AB Photog. elements comprised loaded latex compns. are prepd. by (a) combining under conditions of low or moderate shear, in the presence of a surfactant and in the substantial absence of water-miscible or volatile org. solvents, a liq. org. compn. comprising at least one photog. useful compd. with an aq. polymer latex, (b) holding the combination resulting from (a) in a liq. state for sufficient time for substantial loading of the org. compn. into the polymer latex to occur, and (c) coating the loaded latex resulting from (b) on a support.

IT 99217-03-5

(photog. additive loaded into silver halide emulsions using latex compns.)

RN 99217-03-5 HCA

CN Benzenesulfonic acid, 2,5-dihydroxy-4-(1-methylheptadecyl)-, monopotassium salt (9CI) (CA INDEX NAME)



● K

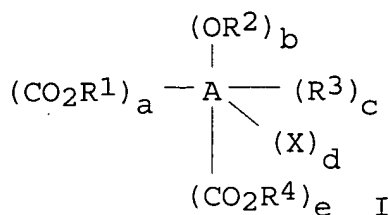
IT 99217-03-5

(photog. additive loaded into silver halide emulsions using latex compns.)

L21 ANSWER 28 OF 85 HCA COPYRIGHT 2003 ACS

121:311765 Photographic composition containing a thickening agent.. Ross, Robert John; Bagchi, Pranab; Connelly, Richard Wayne (Eastman Kodak Co., USA). Eur. Pat. Appl. EP 597289 A1 19940518, 25 pp. DESIGNATED STATES: R: BE, CH, DE, FR, GB, IT, LI, NL. (English). CODEN: EPXXDW. APPLICATION: EP 1993-116962 19931105. PRIORITY: US 1992-975238 19921112.

GI



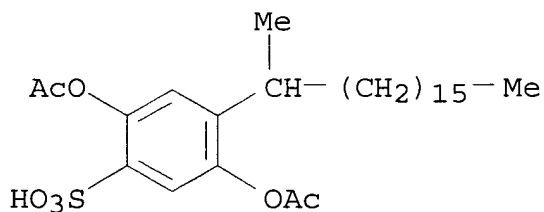
AB This invention describes gelatin thickening compds. for photog. coating melts with the general structure I wherein A is an arom. or heteroatom. group; X is SO₃M or CO₂M M is H or an alkali metal, NH₄⁺ or pyridinium ion; each R¹ and R² is independently an alkyl or substituted alkyl group, each alkyl group being straight or branched chain and having 1 to 30 C atoms; each R³ and R⁴ is independently H or an alkyl or substituted alkyl group, each alkyl group being straight or branched chain and having 1 to 30 C atoms; each of a, b, c and e is independently 0, 1, 2 or 3; and d is 1, 2, or 3; with the proviso that when A is Ph, X is SO₃M, d is 1 and any one of a, c, or e is 1, the sum of a + b + c + e is at least 2.

IT 159322-55-1P

(photog. emulsion gelatin thickening agent)

RN 159322-55-1 HCA

CN Benzenesulfonic acid, 2,5-bis(acetyloxy)-4-(1-methylheptadecyl)-, sodium salt (9CI) (CA INDEX NAME)



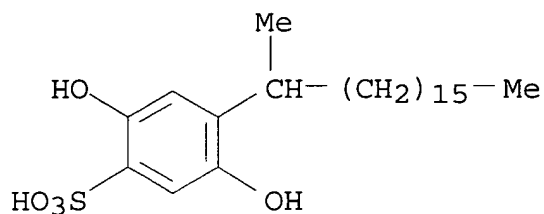
● Na

IT 63059-59-6

(photog. emulsion gelatin thickening agent from)

RN 63059-59-6 HCA

CN Benzenesulfonic acid, 2,5-dihydroxy-4-(1-methylheptadecyl)-, monosodium salt (9CI) (CA INDEX NAME)



● Na

IT 159322-55-1P

(photog. emulsion gelatin thickening agent)

IT 63059-59-6

(photog. emulsion gelatin thickening agent from)

L21 ANSWER 42 OF 85 HCA COPYRIGHT 2003 ACS

111:60003 Synergism in mixtures of anionic and nonionic surfactants. Zheng, Chunyan; Li, Zhipin (Xinjiang Inst. Chem., Acad. Sin., Urumuqia, Peop. Rep. China). Journal of Surface Science and Technology, 4(2), 203-12 (English) 1988. CODEN: JSSTE4. ISSN: 0970-1893.

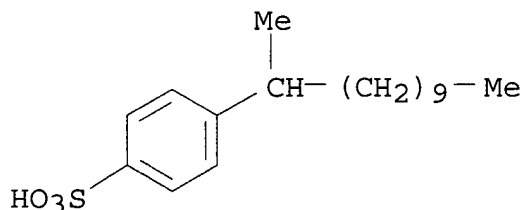
AB The effects of surfactant structure and amt., electrolyte nature and concn., and temp. on crit. micelle concn. and surface tension of aq. mixts of p-RCHMeC6H4SO3Na (R = octyl, decyl, tetradecyl) with octaethylene glycol lauryl ether (I) were examd. for synergistic effects. Increased NaCl concs. and temp. decreased synergism both in mixed micelle and mixed monolayer systems. I formed a complex with CuCl2 which decreased synergism in mixed micelles and increased it in mixed monolayers.

IT 2211-99-6 13419-32-4 73602-65-0

(mixed micelles and monolayers, with nonionic surfactants, synergism in)

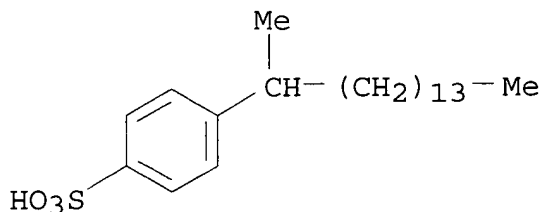
RN 2211-99-6 HCA

CN Benzenesulfonic acid, 4-(1-methylundecyl)-, sodium salt (9CI) (CA INDEX NAME)



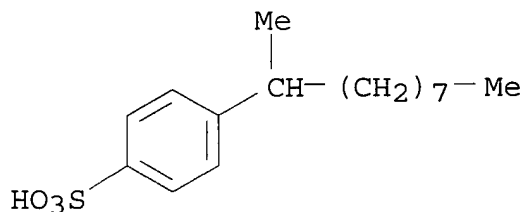
● Na

RN 13419-32-4 HCA
 CN Benzenesulfonic acid, 4-(1-methylpentadecyl)-, sodium salt (9CI)
 (CA INDEX NAME)



● Na

RN 73602-65-0 HCA
 CN Benzenesulfonic acid, 4-(1-methylnonyl)-, sodium salt (9CI) (CA
 INDEX NAME)



● Na

IT 2211-99-6 13419-32-4 73602-65-0
 (mixed micelles and monolayers, with nonionic surfactants,
 synergism in)

L21 ANSWER 44 OF 85 HCA COPYRIGHT 2003 ACS
 108:223508 The effect of surfactant structure on the rate of oil
 solubilization into aqueous surfactant solutions. Bolsman, T. A. B.
 M.; Veltmaat, F. T. G.; Van Os, N. M. (Koninklijke/Shell-Lab.,
 Amsterdam, 1031 CM, Neth.). JAOCS, J. Am. Oil Chem. Soc., 65(2),
 280-3 (English) 1988. CODEN: JJASDH.

AB To support the selection of proper surfactants for laundering,
 relations were established between chem. structure and rate of oil
 solubilization for a series of alkylarenesulfonates with various
 alkyl chain lengths, points of attachment of the Ph group at the
 alkyl chain, and arom. substitution patterns. Oil solubilization
 kinetics was very sensitive to the geometry of the surfactant
 structure: for a set of isomeric alkylarenesulfonates the rate of

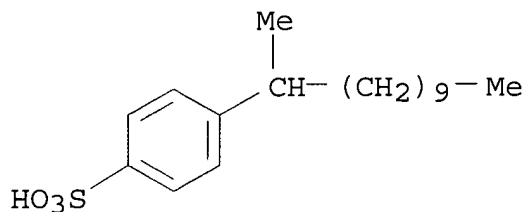
oil solubilization could be made to vary by more than an order of magnitude by changing the substitution pattern around the arom. ring. The results offered a predictive tool for the design of mols. with the proper surface activity under a wide set of exptl. conditions.

IT 2211-99-6 73602-65-0

(oil solubilization by aq., structure effect on)

RN 2211-99-6 HCA

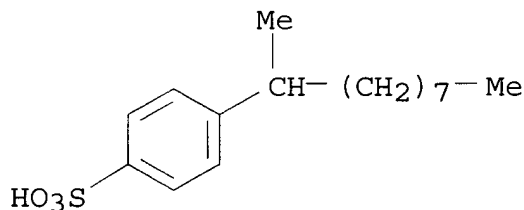
CN Benzenesulfonic acid, 4-(1-methylundecyl)-, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 73602-65-0 HCA

CN Benzenesulfonic acid, 4-(1-methylnonyl)-, sodium salt (9CI) (CA INDEX NAME)



● Na

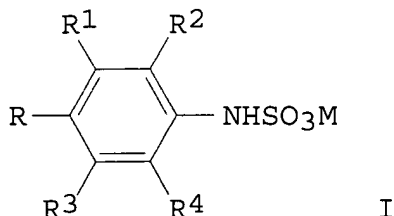
IT 2211-99-6 73602-65-0

(oil solubilization by aq., structure effect on)

L21 ANSWER 50 OF 85 HCA COPYRIGHT 2003 ACS

104:177790 Photothermographic photosensitive materials. Iwagaki, Masaru; Masukawa, Toyoaki; Komamura, Tawara (Konishiroku Photo Industry Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 60191251 A2 19850928 Showa, 18 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1984-47787 19840312.

GI



I

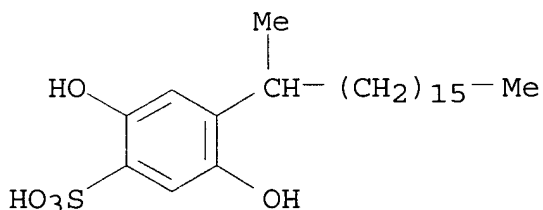
AB Photosensitive layers of the claimed photothermog. materials contain (1) a photosensitive Ag halide, (2) an org. Ag salt, (3) a dye releaser, (4) a binder, (5) a developing agent of the formula I (R = OH, NH₂, alkylamino, dialkylamino, morpholino, pyrrolidinyl, piperazino, piperidino; R¹-R⁴ = H, halo, OH, NH₂, alkoxy, acylamido, sulfonamido, alkyl; M = H, alkali metal, ammonium), and (6) a hot-melt solvent of the formula Z(OH)_n (Z = C₃-8 alkane, alkene, or alicyclic moiety; n = 2-8). The photothermog. materials show good sensitivity, good coloration characteristics and high D_{max}.

IT 63059-59-6

(photothermog. photosensitive materials contg.)

RN 63059-59-6 HCA

CN Benzenesulfonic acid, 2,5-dihydroxy-4-(1-methylheptadecyl)-, monosodium salt (9CI) (CA INDEX NAME)



● Na

IT 63059-59-6

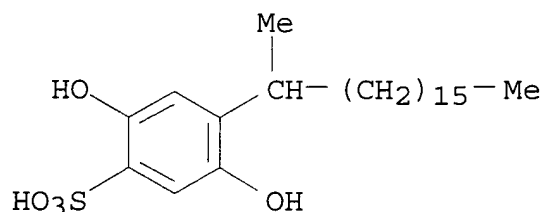
(photothermog. photosensitive materials contg.)

L21 ANSWER 53 OF 85 HCA COPYRIGHT 2003 ACS

102:140724 Multicolor photographic elements containing silver iodide grains. House, Gary L. (Eastman Kodak Co., USA). U.S. US 4490458 A 19841225, 39 pp. Cont.-in-part of U.S. Ser. No. 451,366, abandoned. (English). CODEN: USXXAM. APPLICATION: US 1983-543656 19831019. PRIORITY: US 1982-451366 19821220.

AB A multicolor photog. element is described in which a yellow filter layer can be eliminated without exhibiting color contamination of

the minus blue record and which exhibits improved image sharpness and speed-grain relation of the minus blue records. The elements contains .gtoreq.1 emulsion layer in which >50% of the total projected area of the Ag halide grains is provided by thin tabular AgI grains (.ltoreq.0.3 .mu. thick) and an av. aspect ratio of >8:1. Thus, a tabular grain AgI emulsion with an av. grain diam. of 1.7 .mu.m, an av. grain thickness of 0.095 .mu.m, an av. aspect ratio of 17.9:1, a tabular grain projected area of .gtoreq.50% of the total grain projected area, and an av. grain vol. of 0.21 (CA INDEX NAME)



● Na

IT 63059-59-6

(photog. multilayer element contg., blue-sensitive emulsion for, contg. tabular silver iodide grains)

L21 ANSWER 58 OF 85 HCA COPYRIGHT 2003 ACS

94:58989 Germicide composition for sterilizing hard-surface objects. (Procter and Gamble Co., USA). Jpn. Kokai Tokkyo Koho JP 55129205 19801006 Showa, 12 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1980-14689 19800208.

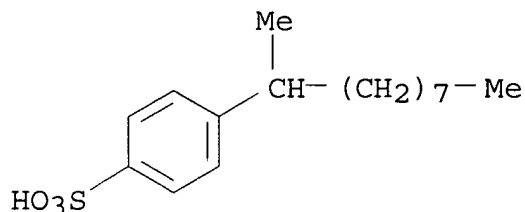
AB (RX-)nMn+ (M = rare earth metal cation; X = H2SO4 or sulfonic acid radical; n = 3 or 4; R = hydrocarbon radical) are germicides for sterilization of hard-surface objects. Prepn. of the compds. is outlined. Thus, 2140 ppm lanthanum (1'-methylnonyl)benzenesulfonate [76277-36-6] in 20% EtOH prevented formation of microbial film on the surface of teeth in vitro.

IT 76277-36-6P

(prepn. and germicidal activity of)

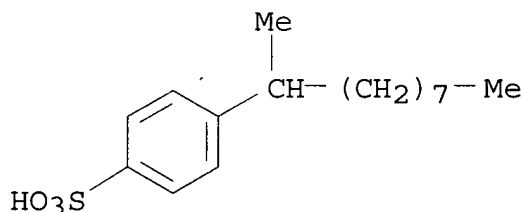
RN 76277-36-6 HCA

CN Benzenesulfonic acid, 4-(1-methylnonyl)-, lanthanum salt (9CI) (CA INDEX NAME)



●x La(III)

IT 73602-65-0
 (reaction of)
 RN 73602-65-0 HCA
 CN Benzenesulfonic acid, 4-(1-methylnonyl)-, sodium salt (9CI) (CA
 INDEX NAME)



● Na

IT 76277-36-6P
 (prepn. and germicidal activity of)
 IT 73602-65-0
 (reaction of)

L21 ANSWER 59 OF 85 HCA COPYRIGHT 2003 ACS

94:32125 Oxidative desizing agent. Adrian, Klaus; Roesch, Guenter
 (Hoechst A.-G., Fed. Rep. Ger.). Ger. Offen. DE 2913177 19801023,
 10 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1979-2913177
 19790402.

AB The addn. of a surfactant to a K2S2O8 desizing agent reduces the
 amt. of fiber degrdn. that occurs during desizing by reducing the
 amt. of K2S2O8 needed to achieve the same desizing effect produced
 without the surfactant. Thus, a cotton twill sized with starch
 [9005-25-8] was impregnated with an aq. soln. contg. 6% NaOH and
 0.5% compn. consisting of polyethylene glycol nonylphenyl ether
 [9016-45-9] 16, secondary C13-18 alkanesulfonate 38, K2S2O8 25, and
 Bu glycolate [7397-62-8] 21%. The fabric was squeezed so that
 liquor add-on was 100%, and steamed at 103-5%, and washed with hot

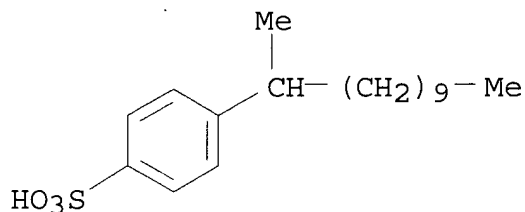
water. The twill displayed bleaching 65.5%, degree of desizing on the violet scale 8-9, and d.p. 2400, vs. 61.0%, 6, and 2150 for a fabric desized with a compn. contg. NaOH 6, alkali persulfate 0.5, and wetting agent 0.5%.

IT 2211-99-6

(oxidative desizing of cotton textiles in presence of, for reduced fiber degrdn.)

RN 2211-99-6 HCA

CN Benzenesulfonic acid, 4-(1-methylundecyl)-, sodium salt (9CI) (CA INDEX NAME)



● Na

IT 2211-99-6

(oxidative desizing of cotton textiles in presence of, for reduced fiber degrdn.)

L21 ANSWER 63 OF 85 HCA COPYRIGHT 2003 ACS

87:138140 Low interfacial tensions involving mixtures of surfactants. Wade, W. H.; Morgan, J. C.; Jacobson, J. K.; Schechter, R. S. (Univ. Texas, Austin, TX, USA). Society of Petroleum Engineers Journal, 17(2), 122-8 (English) 1977. CODEN: SPTJAJ. ISSN: 0037-9999.

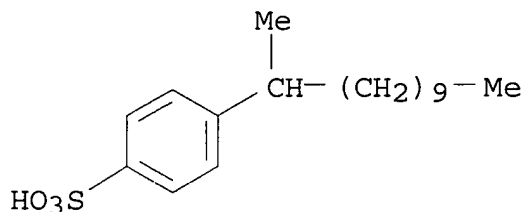
AB The interfacial tension of sulfonate surfactant mixts. with hydrocarbons obeys a simple scaling rule. Many apparently inert surfactants give low tensions when in mixts; the scaling rule still applies to these mixts. A surfactant mixt. behaves as a linear av. of its components, so that the alkane of min. tension(nmin) of a mixt. is the sum of the products of the mole fraction in each component and its individual nmin. For given surfactant components, this allows simple calcn. of the compn. that gives the lowest interfacial tension against a particular alkane or crude oil. The effect of surfactant structure and mol. wt. on low-tension behavior was examd., and use of these results to optimization of surfactant flooding systems is discussed.

IT 2211-99-6

(surfactant mixts. contg., interfacial tension of, with hydrocarbons)

RN 2211-99-6 HCA

CN Benzenesulfonic acid, 4-(1-methylundecyl)-, sodium salt (9CI) (CA INDEX NAME)



● Na

IT 2211-99-6

(surfactant mixts. contg., interfacial tension of, with hydrocarbons)

L21 ANSWER 64 OF 85 HCA COPYRIGHT 2003 ACS

86:73411 Radical initiators. Suzuki, Soichi; Horino, Hiroshi; Ohishi, Tetsu (Nippon Zeon Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 51125469 19761101 Showa, 6 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1975-23615 19750226.

AB Radical initiators were prepd. by peroxidizing secondary alkylbenzene derivs. contg. hydrophilic group. For example, 14.7% aq. K 4-isopropylbenzoate [16518-27-7] was pressured with 15 kg/cm² gage O at 85.degree. for 18 h with 88% conversion to peroxide catalyst (I). Acrylonitrile 25, butadiene 75, water 200, Na naphthalenesulfonate-HCHO condensate 2.0, residue from I manuf. 2.0, I 0.2, Na₂SO₄ 0.1, and tert-dodecyl mercaptan 0.4 part were stirred at 5.degree. for 30 min, treated with FeSO₄ 0.02, EDTA tri-Na salt 0.03, and Na formaldehyde sulfoxylate 0.4 part, and polymd. at 50.degree. for 25 hr; the conversion was 90%.

IT 61776-72-5D, peroxidized
(catalysts, for emulsion polymn.)

RN 61776-72-5 HCA

CN 3,6,9,12,15,18,21-Heptaoxatricosan-1-ol, 23-[4-(1-methyltridecyl)phenoxy]-, hydrogen sulfate, sodium salt (9CI) (CA INDEX NAME)

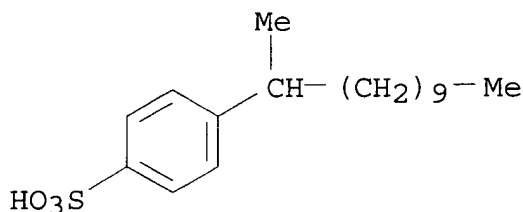
sulfonate, ammonium decylnaphthol sulfonate, or ammonium p-dodecylbenzenesulfonate were used instead of I. Other thickeners used were galactomannan or Solvitose OFA. The impregnation baths had improved stability and homogeneity. The fixation time was short.

IT 2211-99-6

(dyeing of polyamide fibers in baths contg.)

RN 2211-99-6 HCA

CN Benzenesulfonic acid, 4-(1-methylundecyl)-, sodium salt (9CI) (CA INDEX NAME)



● Na

IT 2211-99-6

(dyeing of polyamide fibers in baths contg.)

L21 ANSWER 73 OF 85 HCA COPYRIGHT 2003 ACS

67:45100 Structural characterization and surfactant properties of some alkyl aryl products based on fats. Achaya, Kongandra T.; Amma, Mrs. P. K. Saraswathy (Regional Res. Lab., Hyderabad, India). Indian Journal of Chemistry, 5(3), 109-14 (English) 1967. CODEN: IJOCAP. ISSN: 0019-5103.

AB Friedel-Crafts alkylation of C₆H₆ with products derived from castor oil or from normal fatty acids, viz., fatty alkyl chlorides, half ester-half acid chlorides of dibasic acids and terminally unsatd. fatty esters was carried out and products before and after sulfonation characterized by a combination of gas-liquid and thin-layer chromatog., ir, and mol. wt. detn. by uv absorption. The products after sulfonation were evaluated for their surfactant properties. I was a mixt. of 1-, 2-, and 3-phenylheptanes (61, 34, and 5%, resp.), which on sulfonation gave the para sulfonate accompanied by some ortho isomer. [TABLE OMITTED] II was wholly 1-phenyldodecane, which on sulfonation gave the para sulfonate. III was a mixt. of methyl 10-, 9- and 8-phenyl undecanoates (39, 17, and 44%, resp.), which were sulfonated only at the para position. Similarly, IV was a mixt. of 10-, 9- and 8-tolyl isomers, which were sulfonated meta to the long alkyl chain. The phenones and keto esters could be sulfonated with difficulty to poor surfactants. The sulfonation of alkyl aryl hydrocarbons was carried out in CCl₄ at 5-10.degree. with 1.2 parts 20% oleum. Ketones and keto esters could be sulfonated in CCl₄ with 4 parts oleum contg. 45% SO₃. The

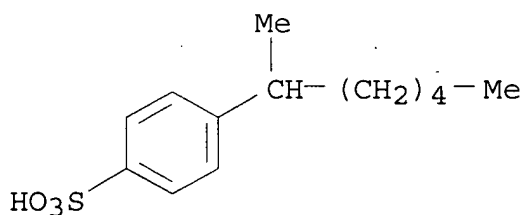
earlier claim of Fourneau and Baranger (CA 26: 715), who claimed to have obtained .alpha.- and .alpha.'-phenyl isomers (in place of III in the present investigation) in the Friedel Crafts condensation of C₆H₆ and methyl undecenoate is not correct. Sulfonated heptylbenzene was a poor surfactant. Dodecylbenzene sulfonate was slightly inferior to the branched tetrapropylene product. The surface properties of 2-methylundecanoate derivs. were comparable to tetrapropylbenzene sulfonate and had considerably better Ca tolerance. The toluene-derived meta sulfonate was inferior in detergency and wetting but superior in emulsifying and dispersing ability to the benzene-derived para sulfonate. The latter was superior in deterative ability and enormously superior in Ca tolerance to tetrapropylbenzenesulfonate.

IT 16577-17-6 16577-18-7

(surface-active)

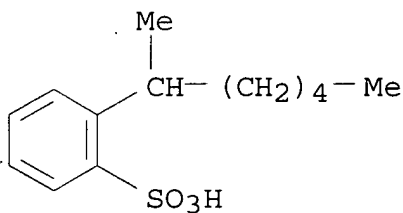
RN 16577-17-6 HCA

CN Benzenesulfonic acid, p-(1-methylhexyl)- (8CI) (CA INDEX NAME)



RN 16577-18-7 HCA

CN Benzenesulfonic acid, o-(1-methylhexyl)- (8CI) (CA INDEX NAME)



IT 16577-17-6 16577-18-7

(surface-active)

L21 ANSWER 75 OF 85 HCA COPYRIGHT 2003 ACS

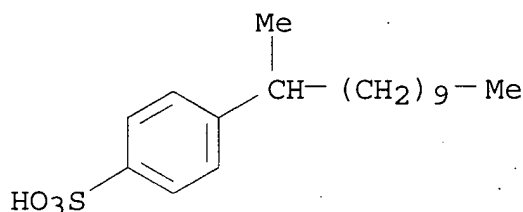
65:74586 Original Reference No. 65:13967g-h Isomeric linear phenylalkanes and sodium alkylbenzenesulfonates. Smith, F. D.; Stirton, A. J.; Nunez-Ponzoa, M. V. (Eastern Reg. Res. Lab, Philadelphia, PA). Journal of the American Oil Chemists' Society, 43(8), 501-4 (English) 1966. CODEN: JAOCA7. ISSN: 0003-021X.

AB Linear phenylalkanes made from C₁₂, C₁₄, C₁₆, and C₁₈

.alpha.-olefins and C₆H₆ with AlCl₃ or MeSO₃H as the condensing agent, were found by gas-liquid chromatography of the acetophenone homologs obtained by chromic acid oxidn. to be a mixt. of all

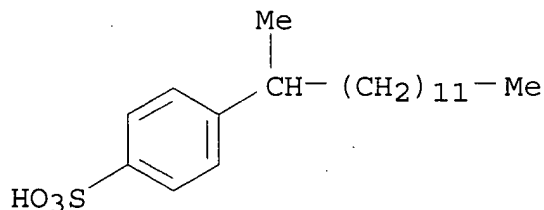
possible internal position isomers. Product distribution measured by the relative amts. of acetophenone homologs must be corrected in the case of the 2- and 3-phenylalkanes because of unequal oxidative scission and differing ease of oxidn. The 2-phenyl isomer, formed in largest amt. and presumably the highest melting isomer, was sepd. by low-temp. crystn. from Me₂CO. The phenylalkane product mixts. and the isolated 2-phenyl isomers were sulfonated, and detergent and surface-active properties were compared. The Na p-alkylbenzenesulfonates from the 2-phenylalkanes were more, biodegradable than the mixts. in the river water die-away test. 13 references.

- IT 2211-99-6, Benzenesulfonic acid, p-(1-methylundecyl)-, sodium salt 13419-31-3, Benzenesulfonic acid, p-(1-methyltridecyl)-, sodium salt 13419-32-4, Benzenesulfonic acid, p-(1-methylpentadecyl)-, sodium salt 13419-33-5, Benzenesulfonic acid, p-(1-methylheptadecyl)-, sodium salt (biodegradability and surface-active properties of)
- RN 2211-99-6 HCA
- CN Benzenesulfonic acid, 4-(1-methylundecyl)-, sodium salt (9CI) (CA INDEX NAME)



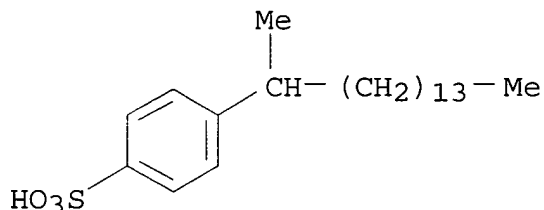
● Na

- RN 13419-31-3 HCA
- CN Benzenesulfonic acid, 4-(1-methyltridecyl)-, sodium salt (9CI) (CA INDEX NAME)



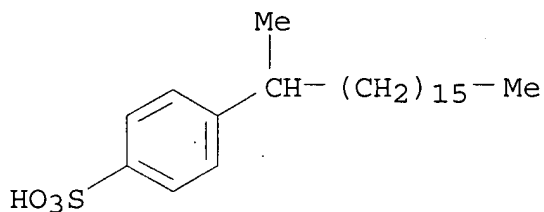
● Na

RN 13419-32-4 HCA
 CN Benzenesulfonic acid, 4-(1-methylpentadecyl)-, sodium salt (9CI)
 (CA INDEX NAME)



● Na

RN 13419-33-5 HCA
 CN Benzenesulfonic acid, p-(1-methylheptadecyl)-, sodium salt (7CI, 8CI) (CA INDEX NAME)



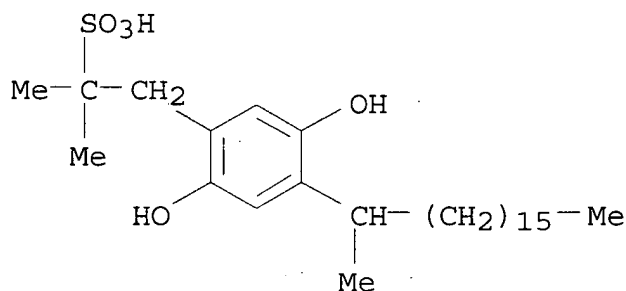
● Na

IT 2211-99-6, Benzenesulfonic acid, p-(1-methylundecyl)-, sodium salt 13419-31-3, Benzenesulfonic acid, p-(1-methyltridecyl)-, sodium salt 13419-32-4, Benzenesulfonic acid, p-(1-methylpentadecyl)-, sodium salt 13419-33-5, Benzenesulfonic acid, p-(1-methylheptadecyl)-, sodium salt
 (biodegradability and surface-active properties of)

L21 ANSWER 76 OF 85 HCA COPYRIGHT 2003 ACS
 64:48886 Original Reference No. 64:9135d-g Emulsions for direct positive color images. Whitmore, Keith E. (Eastman Kodak Co.). US 3227552 19660104, 18 pp. (Unavailable). APPLICATION: US 19620828.
 GI For diagram(s), see printed CA Issue.
 AB Photographic elements contg. at least 1 reversal Ag halide emulsion are treated with aromatic primary amino developers in the presence of a compd. of the general formula RNHNHR1 (I) or RNHN:X (II), where R is an aryl group (which can contain OH, NH2, or alkyl, amino, amido, alkoxy, aryloxy, or acyloxy groups), R1 is an acyl or

sulfonyl group, and X is an alkylidene group, and (optional) a compd. of the general formula III or IV, where R is an alkylene or acylamino group, R1 and R2 are alkyl or acylamino groups, or R1 is H or SO3H, at 1-20 mg. I or II/sq. ft. light-sensitive layer or 0.1-2 g. I or II/l. developer, to give images with increased dye d. Thus, a film support (720 sq. ft.) is coated with 7200 g. aq. compn. contg. 1 mole Ag(Cl,Br) emulsion having high internal sensitivity, low surface sensitivity, and sensitized to red light, 590 g. 10% gelatin (H2O), 360 cc. 3% aq. di-K 2-(3,5-disulfobenzamido)-4-(3-octadecylcarbamoylphenylthio)-5-methylphenol, 500 cc. 15% saponin (H2O), 10 cc. 10% aq. H2CO, and 450 cc. 2% 5-(1-carbo-2-phenylhydrazino)-1-phenyl-3-pyrazolidone (V) (MeOH), and the element is exposed and developed with 1 l. developer contg. 10 g. p-H2NC6H4N(Et)CH2CH2OH, to give Cyan Dmax. 1.50 as compared with 1.13 for the control (no V).

- IT 6892-66-6, Ethanesulfonic acid, 2-[2,5-dihydroxy-4-(1-methylheptadecyl)phenyl]-1,1-dimethyl-
(in photographic color developer for diffusion-transfer process)
- RN 6892-66-6 HCA
- CN Ethanesulfonic acid, 2-[2,5-dihydroxy-4-(1-methylheptadecyl)phenyl]-1,1-dimethyl- (7CI, 8CI) (CA INDEX NAME)



- IT 6892-66-6, Ethanesulfonic acid, 2-[2,5-dihydroxy-4-(1-methylheptadecyl)phenyl]-1,1-dimethyl-
(in photographic color developer for diffusion-transfer process)

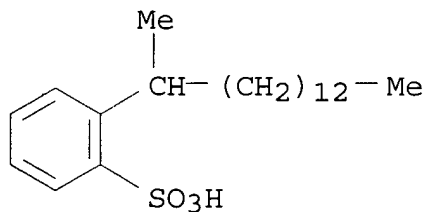
121 ANSWER 77 OF 85 HCA COPYRIGHT 2003 ACS

64:20618 Original Reference No. 64:3857g-h Deterative properties of model straight chain sodium alkyl-benzenesulfonates. Gray, Frederick W.; Krems, Irving S.; Gerecht, J. Fred (Colgate-Palmolive Co., New Brunswick, NJ). Journal of the American Oil Chemists' Society, 42(11), 998-1001 (English) 1965. CODEN: JAOCA7. ISSN: 0003-021X.

- AB Model long-chain Na .omicron.- and p-alkylbenzenesulfonates having primary, secondary, and tertiary C atoms attached to the phenyl group were evaluated for foam, wetting, and detergency. The surface, active properties depended upon sulfonate position, phenyl position, and chain length. .omicron.-Sulfonates were better wetting agents than p-sulfonates, but the p-compds. foam better and appear to have superior detergency properties than their respective .omicron.-isomers. .omicron.-Sulfonates in detergent compns. may

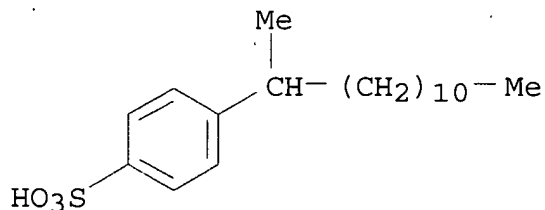
have a greater influence on surface-active properties than has been heretofore recognized.

IT 6148-71-6, Benzenesulfonic acid, o-(1-methyltetradecyl)-, sodium salt
(surface active)
RN 6148-71-6 HCA
CN Benzenesulfonic acid, o-(1-methyltetradecyl)-, sodium salt (7CI, 8CI) (CA INDEX NAME)



● Na

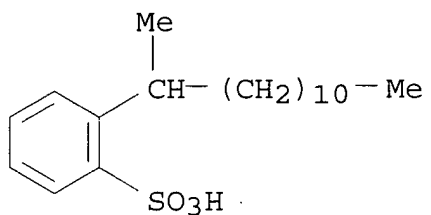
IT 6148-68-1, Benzenesulfonic acid, p-(1-methyldodecyl)-, sodium salt 6148-69-2, Benzenesulfonic acid, o-(1-methyldodecyl)-, sodium salt 6148-70-5, Benzenesulfonic acid, p-(1-methyltetradecyl)-, sodium salt 6149-04-8, Benzenesulfonic acid, p-(1-methylhexadecyl)-, sodium salt 6179-38-0, Benzenesulfonic acid, o-(1-methylhexadecyl)-, sodium salt 6183-51-3, Benzenesulfonic acid, p-(1-methyldecyl)-, sodium salt 6183-52-4, Benzenesulfonic acid, o-(1-methyldecyl)-, sodium salt
(surface-active)
RN 6148-68-1 HCA
CN Benzenesulfonic acid, 4-(1-methyldodecyl)-, sodium salt (9CI) (CA INDEX NAME)



● Na

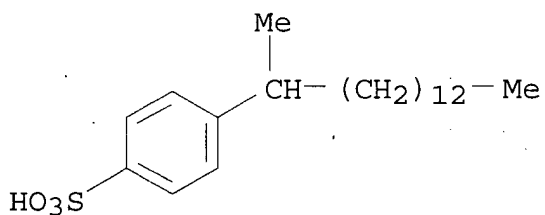
RN 6148-69-2 HCA
CN Benzenesulfonic acid, o-(1-methyldodecyl)-, sodium salt (6CI, 7CI,

8CI) (CA INDEX NAME)



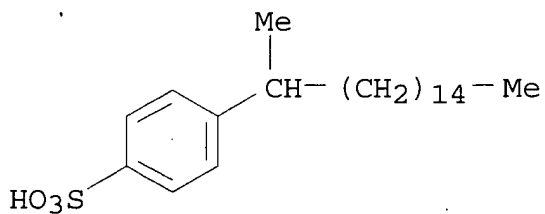
● Na

RN 6148-70-5 HCA
CN Benzenesulfonic acid, p-(1-methyltetradecyl)-, sodium salt (7CI, 8CI) (CA INDEX NAME)



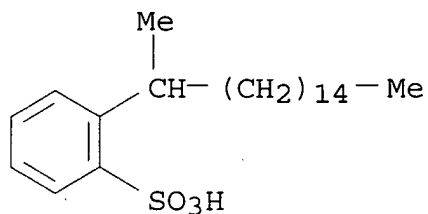
● Na

RN 6149-04-8 HCA
CN Benzenesulfonic acid, p-(1-methylhexadecyl)-, sodium salt (6CI, 7CI, 8CI) (CA INDEX NAME)



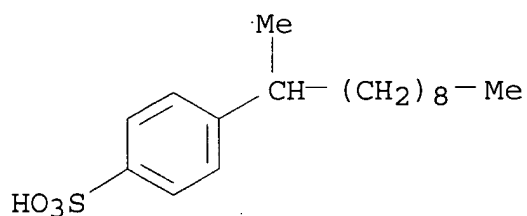
● Na

RN 6179-38-0 HCA
CN Benzenesulfonic acid, o-(1-methylhexadecyl)-, sodium salt (6CI, 7CI, 8CI) (CA INDEX NAME)



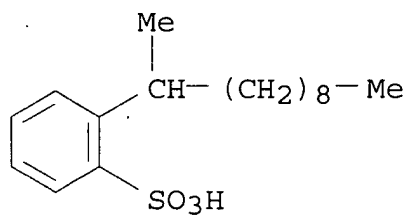
● Na

RN 6183-51-3 HCA
 CN Benzenesulfonic acid, 4-(1-methyldecyl)-, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 6183-52-4 HCA
 CN Benzenesulfonic acid, o-(1-methyldecyl)-, sodium salt (7CI, 8CI) (CA INDEX NAME)



● Na

IT 6148-71-6, Benzenesulfonic acid, o-(1-methyltetradecyl)-, sodium salt (surface active)
 IT 6148-68-1, Benzenesulfonic acid, p-(1-methyldodecyl)-,

sodium salt 6148-69-2, Benzenesulfonic acid, o-(1-methyldodecyl)-, sodium salt 6148-70-5, Benzenesulfonic acid, p-(1-methyltetradecyl)-, sodium salt 6149-04-8, Benzenesulfonic acid, p-(1-methylhexadecyl)-, sodium salt 6179-38-0, Benzenesulfonic acid, o-(1-methylhexadecyl)-, sodium salt 6183-51-3, Benzenesulfonic acid, p-(1-methyldecyl)-, sodium salt 6183-52-4, Benzenesulfonic acid, o-(1-methyldecyl)-, sodium salt
(surface-active)

L21 ANSWER 78 OF 85 HCA COPYRIGHT 2003 ACS

63:19925 Original Reference No. 63:3555e-g Effects of structural variations in ionic surfactants on phytotoxicity and physical-chemical properties of aqueous sprays of several herbicides. Jansen, L. L. (U.S. Dept. of Agr., Beltsville, MD). Weeds, 13(2), 117-23 (English) 1965. CODEN: WEEDAT. ISSN: 0096-719X.

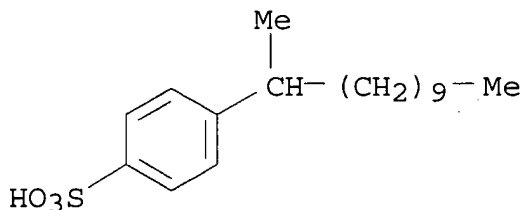
AB cf. CA 61, 1187h; following abstr. Herbicides used were dalapon, 2,4-D, DNBP, and amitrole. Appreciable enhancement of herbicidal activity occurred only at a surfactant concn. of 1 g./100 ml. With straight chain isomers of dodecylbenzenesulfonate enhancement of all herbicides increased as the position of the ring was moved from the end to the C-5 and C-6. DNBP toxicity to both corn and soybean and surfactant toxicities to soybean were increased progressively in sep. odd- and even-C series--at C atoms 1-6. Other variations which provided marked enhancement were a highly branched dodecyl and substitution of an ester O for the benzene ring. Among ethoxylated alkylamine cationic surfactants, variations in alkyl structure affected differentially the toxicities of the various herbicides in alk., acid, and neutral solns. Surface tension and sp. cond. could not be correlated with herbicidal effect.

IT 2211-99-6, Benzenesulfonic acid, p-(1-methylundecyl)-, sodium salt

(cytotoxicity and other properties of, surfactant effect on)

RN 2211-99-6 HCA

CN Benzenesulfonic acid, 4-(1-methylundecyl)-, sodium salt (9CI) (CA INDEX NAME)



● Na

IT 2211-99-6, Benzenesulfonic acid, p-(1-methylundecyl)-, sodium salt
(cytotoxicity and other properties of, surfactant effect on)

L21 ANSWER 80 OF 85 HCA COPYRIGHT 2003 ACS

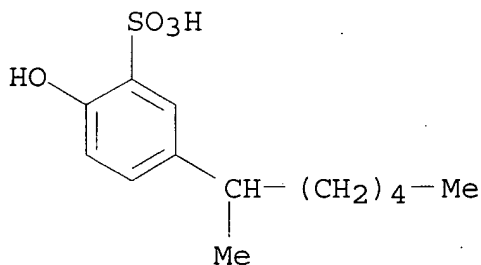
61:25089 Original Reference No. 61:4249d-e Sulfonation of alkylphenols. Romadane, I.; Kochetkova, E. A. (Polytech. Inst., Riga, Latvia). Latvijas PSR Zinatnu Akademijas Vestis, Kimijas Serija (1), 51-5 (Russian) 1964. CODEN: LZAKAM. ISSN: 0002-3248.

AB Sulfonation of p-sec-alkylphenols with concd. H₂SO₄ (I) or dioxane-SO₂ (II) yielded p-sec-alkylphenol-o-sulfonic acids, identified as their Na and benzylthiuronium salts. The reaction was carried out in 25% excess I at 98-100.degree. to give 70-5% yield. Sulfonation with 3 moles II was carried out in boiling dichloroethane with a 90% yield. After treating the reaction mixt. with satd. NaCl, the Na salt was sepd. Sulfonation with II led to acids of higher purity. Addn. of Na salts to a satd. soln. of S-benzylthiuronium chloride gave the following benzylthiuronium salts of RCHMeC₆H₃(SO₃H)OH-3,4 (R and m.p. given): Et, 162.degree.; Pr, 108.degree.; Bu, 152.degree.; Am, 155.degree.. The ultraviolet and infrared spectra of the Na salts were discussed.

IT 94466-72-5, Benzenesulfonic acid, 2-hydroxy-5-(1-methylhexyl)-, sodium salt
(prepn. of)

RN 94466-72-5 HCA

CN Benzenesulfonic acid, 2-hydroxy-5-(1-methylhexyl)-, sodium salt (7CI) (CA INDEX NAME)



● Na

IT 94466-72-5, Benzenesulfonic acid, 2-hydroxy-5-(1-methylhexyl)-, sodium salt
(prepn. of)

L21 ANSWER 84 OF 85 HCA COPYRIGHT 2003 ACS

52:119793 Original Reference No. 52:21173f-h Dependence of surface-active and detergent properties of alkylbenzenesulfonates on the length and structure of the alkyl chain. Petrov, A. D.; Nikishin, G. I.; Nevolin, F. V.; Kral-Osikina, G. A.; Orekhova, M.

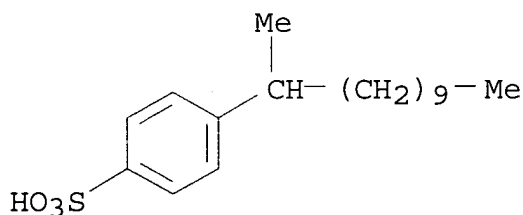
V.; Yushkevich, A. V. Masloboino-Zhirovaya Promyshlennost, 24 (No. 8), 23-9 (Unavailable) 1958. CODEN: MAZHA8. ISSN: 0368-8712.

AB cf. C.A. 51, 18658d. Twelve synthetic benzenesulfonate compds. with C8-C12 branched and straight alkyl chain were prepd. and tested for their effects on the surface tension (I) of water, detergency (II), and foam height (III). The results confirmed the work of Griess (C.A. 49, 16474e), Gray, et al. (C.A. 50, 4058a), namely that I, II, and III are influenced greatly by the length and structure of chain, and the position of SO₃H on the C₆ ring. The authors concluded that the compd. with C11-C12 branched chain were very effective as I depressants for water, gave better II and higher III, than their respective straight-chain isomers, or compd. with progressively shorter chain.

IT 18777-53-2, Benzenesulfonic acid, p-(1-methylundecyl)-
(manuf. and surface-active properties of)

RN 18777-53-2 HCA

CN Benzenesulfonic acid, 4-(1-methylundecyl)- (9CI) (CA INDEX NAME)



IT 18777-53-2, Benzenesulfonic acid, p-(1-methylundecyl)-
(manuf. and surface-active properties of)

L21 ANSWER 85 OF 85 HCA COPYRIGHT 2003 ACS

51:75186 Original Reference No. 51:13517f-h Physicochemical properties of solutions of para long-chain alkylbenzenesulfonates. Gershman, Jacqueline W. (Colgate-Palmolive Co., Jersey City, NJ). J. Phys. Chem., 61, 581-4 (Unavailable) 1957. CODEN: JPCHAX. ISSN: 0022-3654.

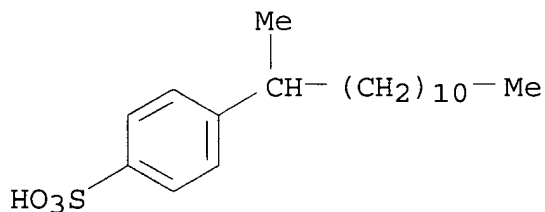
AB Soly.-temp. curves were detd. for the branched alkylbenzenesulfonates with the general formula Na p-(1-methylalkyl)-benzenesulfonate, where the alkyl group contained from 10 to 16 C atoms. Krafft temps. and crit. micelle concn. (CMC) values were derived for each compd. Surface tension was measured for aq. solns. of alkylbenzenesulfonates with the general formula of either Na p-(1-methylalkyl)-benzenesulfonate or Na p-alkylbenzenesulfonate, where the alkyl group varied from 10 to 16 C atoms in the former and 8 to 10 in the latter. The surface tension and CMC were lowered by the addn. of the Me group. Elec. cond. was measured for these compds. and for Na p-dodecylbenzenesulfonate. The CMC values obtained by soly., surface tension, and cond. were compared. Contrary to prior experience with com. sulfonate, it was possible to form slow-draining films with some of the compds. studied.

IT 6148-68-1, Benzenesulfonic acid, p-1-methyldodecyl-, sodium

salt **6148-70-5**, Benzenesulfonic acid, p-(1-methyltetradecyl)-, sodium salt **6149-04-8**, Benzenesulfonic acid, p-1-methylhexadecyl-, sodium salt **6183-51-3**, Benzenesulfonic acid, p-1-methyldecyl-, sodium salt (physicochem. properties of)

RN 6148-68-1 HCA

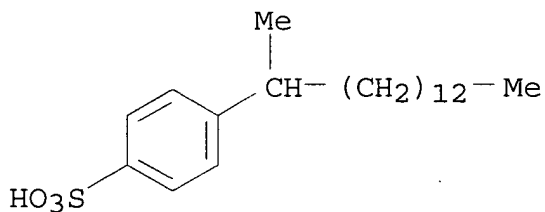
CN Benzenesulfonic acid, 4-(1-methyldodecyl)-, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 6148-70-5 HCA

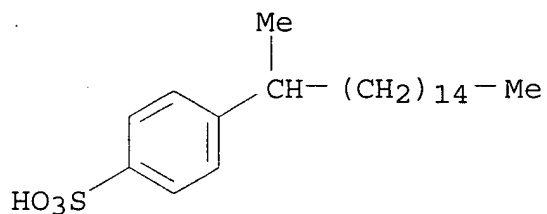
CN Benzenesulfonic acid, p-(1-methyltetradecyl)-, sodium salt (7CI, 8CI) (CA INDEX NAME)



● Na

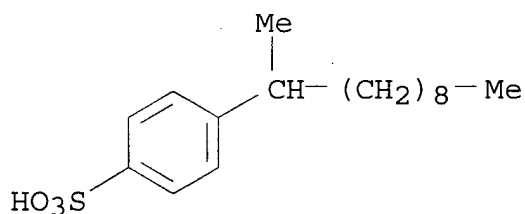
RN 6149-04-8 HCA

CN Benzenesulfonic acid, p-(1-methylhexadecyl)-, sodium salt (6CI, 7CI, 8CI) (CA INDEX NAME)



● Na

RN 6183-51-3 HCA
 CN Benzenesulfonic acid, 4-(1-methyldecyl)-, sodium salt (9CI) (CA
 INDEX NAME)



● Na

IT 6148-68-1, Benzenesulfonic acid, p-1-methyldodecyl-, sodium
 salt 6148-70-5, Benzenesulfonic acid, p-(1-
 methyltetradecyl)-, sodium salt 6149-04-8, Benzenesulfonic
 acid, p-1-methylhexadecyl-, sodium salt 6183-51-3,
 Benzenesulfonic acid, p-1-methyldecyl-, sodium salt
 (physicochem. properties of)